



SEQUENCE LISTING

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<120> A METHOD FOR ISOLATING A POLYNUCLEOTIDE OF INTEREST
FROM THE GENOME OF A MYCOBACTERIUM USING A BAC-BASED
DNA LIBRARY. APPLICATION TO THE DIRECTION OF
MYCOBACTERIA.

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<140> PCT/IB 99/00740

<141> 1999-04-16

<150> US 09/060756

<151> 1998-04-16

<160> 726

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Mycobacterium tuberculosis

<400> 1

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tggttggtc	gc					12732

<210> 2
 <211> 289
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 2					
atactcaagc	ttgccgcaat	cgaaaccaac	ctgtttgtgc	cgcaagaaat	tacgccgtgg 60
cccggcgccg	atcaagaaac	gccccggcgc	gcggcgggtg	cgtcgtatgg	catgacgggc 120
accaatgtgc	acgccattgt	cgagcaggca	ccggtgccag	ccccgaatc	cgggtgcacca 180
ggcgacaccc	cggccacacc	cggtatcgac	ggcgcgctgc	tggtcgcgct	gtcggccagc 240
tcgcaggacg	cgctgcggca	aaccgccgcg	cggctggccg	attgggtct	289

<210> 3
 <211> 278
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 3					
ttggcggggt	ggccacacac	cgcgcgggtg	cggcgacgat	gctgggctgg	ttgcggccct 60
gcgccaccgc	ggcttgcatg	ctggttggct	gtcttgggac	gatcccga	tagtccacgc 120
ggatctggtg	attttgcggg	ctaccgcgca	ttaccgcgcg	cggctcgacg	agtttttggc 180
ctggactacc	cgcgtggcca	atctgctgaa	ctcgcgcccg	gtggtggcct	ggaatgtcca 240
cgccgttcac	ctacgtgacc	ttgatgggat	cggggggt		278

<210> 4
 <211> 1280
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 4					
cgcacccaga	cactgaccgg	gcgaccgctg	atcggaacg	gcacccccgg	ggcggtcggc 60
agcggggcca	ccggggcccc	cgggtgggtg	ctgctcggcg	acggcggggc	cggcgggtcc 120
ggcgcgccgg	gctcggggcg	gcccggcggg	gcggggcggg	ctgccgggct	gtgggggtacc 180
ggcggggccg	gcgggatcgg	cggagccagc	accgtactcg	gcggcaccgg	cgggggagggc 240
ggggtcgggt	ggctgtgggg	cgccgggtgg	gcccggcggg	ccggtggaac	cggccttggt 300
ggtggcgacg	gcggggcccg	tggggccggc	ggacccggcg	gactgctggc	cgggctgatc 360
ggtgccggcg	gaggtcacgg	cgggaccggc	gggctcagca	ctaattggcg	cggcgggggt 420
ggcggggccg	gcgggaatgc	cggaatgctc	gccgggcggg	gcggcgccgg	cggagccggc 480
ggtgacggcg	aaaacctgga	caccgggtgg	gacggcgggg	ccggcggtag	cgcagggctg 540
ctgttcggca	gcggcgccgc	cggcgccgcc	ggcggtattg	gtttcctcgg	tggggacggc 600
ggggccgggtg	gcaacgccgg	gctgctgttg	tccagcgggc	gggcggcgcg	gttcggcggg 660

ttcggcaccg	cgggtggggt	cgggtggggcc	ggcggcaatg	cgggctggct	gggcttcggc	720
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ggcaccggcg	gtcagttatg	gggtagcggc	ggcgccggcg	tcgaaggcgg	cgcagcctta	840
agcgtcggcg	acaccggcgg	ggccgggtgg	gtcggcgcca	gcgcggggct	gatcggcacc	900
ggcggcaacg	gcggaacggc	cggcaccggc	gccaacggcg	gcagccccgg	aaccggcggc	960
gccggcgggg	tgctgctggg	ccaaaacggg	ctcaacgggt	tgccgtagcc	gggcggcacg	1020
gcatggcttc	cgggcgtcaa	ccactcgccg	gtgatgcaga	tcggctgcgg	agcggggccg	1080
caaaatgggg	gccgcccggc	caggatatct	ggcgaagatc	cccggcgctc	gagcgctttg	1140
tcagaggccc	gtcgcgggtc	gtcgtgacga	cggctatccg	ggcgggtcgg	gtttcgcggc	1200
gcgccctgtg	cccggcaccg	ccgcccgttt	gtcggcaacg	ccgccgcgac	ccgtgagccg	1260
tccagcagct	ggcgctgcg					1280

<210> 5
 <211> 127
 <212> DNA
 <213> Mycobacterium tuberculosis

gggcatcggc	ggaatcggcg	gtaacgctaa	cggggcgccc	ggtgggaacg	gcggcaccgg	60
cggtcagtta	tggggtagcg	gcggcgccgg	cgtcgaaggc	ggcgcagcct	taagcgtcgg	120
cgacacc						127

<210> 6
 <211> 434
 <212> DNA
 <213> Mycobacterium tuberculosis

aataactcaag	cttgcccagc	cgtcgatgac	aagaaatatg	tccgcaaaaag	actcagcggc	60
cgacttttgt	cgcagctggc	ggtaccgcgc	caccgattct	atgccgtggg	cgcggaaaaa	120
tgctctccga	aatcgcacgg	ccgactccag	ttcggcgagc	atccgcgatg	ccagctgcgg	180
ctgcgccttg	cgggccacgg	caccacatg	cggcagttcg	tccacctggg	ccagcgcccc	240
gccgccgaat	tccaaacaat	agaactgcac	cgggcccgca	tcgtgggtaa	cagccaacgc	300
catgatcagc	gtccgcagcg	cggttgactt	gcccgtttgc	ggtgcacct	cgaacgcgac	360
attgcctgcg	gccccggaca	agtcgatcgt	gcgcggcacc	cgtgactgct	ctaacggggc	420
attgaaattc	cgat					434

<210> 7
 <211> 332
 <212> DNA
 <213> Mycobacterium tuberculosis

ccacccgtgt	aatttgggat	gggcaaaaag	gcgaagcacc	gcgtggccac	gaacgcgggg	60
agggacaatc	tcgggcgggt	agggtttctc	gcgggaaggc	ccgaacgtac	ggcgtttcaa	120
cacctcgcgt	cgccctccga	ccgcgaacat	tcggggatgg	cagcaacctg	ctggcaccct	180
ggccggggcg	tgatctgcag	cgtcgcgcgc	ggtagtcgcc	gcccggggcg	ctacactctg	240
aaacgcgatg	accatcgatg	tgtggatgca	gcatccccgac	gcaacggttc	ctacaccgcg	300
atatgttcgc	ctcgtctgcc	cgggtggaccg	gt			332

<210> 8
 <211> 354
 <212> DNA

<213> Mycobacterium tuberculosis

<400> 8

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aataactcaag ctttcgcgcg ataccgcgca tgtcgcgcac atccaggact tctgggggga 60
tccgctgaca gcggcgggat cccaaagtgc ggatgatcgg gccgcctacg tcgtggtgta 120
cctcgtcggg aacaacgaaa ccgaagcgta tgactcggtc cacgcggtgc ggcacatggg 180
ggacaccaca ccgccaccgc acgggggtgaa ggcctatgtc accggtccgg cagcactcaa 240
tgccgaccag gccgagggcg gagacaaaag tatcgctaag gtcaccgcga tcaccaacat 300
ggtgatcgca gcaatgttgc tagtgatcta tcgctccgta attaccgcgg ttct 354
```

<210> 9

<211> 353

<212> DNA

<213> Mycobacterium tuberculosis

<400> 9

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gtgccgttcc aaccggaatt ggctttcggc gccatcggtg aggacggcgt gcgggtgctc 60
aacgacgacg tcgtccgcgg gacacacctc gatgctgccg ccatggacgc ggtcgaacgc 120
aagcagctga tcgagctaca acgcgcgcgg gaacgcttcc gccgcgggcg tgaccgcac 180
ccgttgaccg ggcggatcgc ggtgatcgtc gatgacggca tcgccaccgg agcgacggcc 240
aaggcggcgt gccagggtgc ccgggcgcac ggtgcggaca aggtggtgct ggcgggtccc 300
atcggcccag acgacatcgt ggcgagattc gccgggtacg ccgatgaggt ggt 353
```

<210> 10

<211> 279

<212> DNA

<213> Mycobacterium tuberculosis

<400> 10

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aataactcaag ctttcggcgg aaacggacac attgcgaata ttgatgacaa aataaaaaatc 60
attgatgggt tgagtcacca ggccgatcaa gccttcgccg agccaaattc caatcaagag 120
gcccaagccc gtaccaatca gcccggaac gagggattcc gtcattatca gccaaaataa 180
ctgctctcgg gttacacca aacagcgcaa tatggcgaaa aacggtcgcc gttgcacgac 240
attaaatgtc acggtattgt agattaaaaa gataccac 279
```

<210> 11

<211> 376

<212> DNA

<213> Mycobacterium tuberculosis

<400> 11

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tgtctccgaa acctgggggt gtgcctgctc tgtatgcacg gcatacggac atccttcccc 60
tgagaccgcg ggtcgaacca gccacgtgtc catcatagng ggtcaacccc ggccaagggc 120
gacggcacgc caagttcgcc gaccgttaac ctagtgtctg tagcttcatt tgctgcgac 180
aaaacagctg gtcggccggt aggaactgaa ttgaaactca accgatttgg tgccgccgta 240
ggtgtcctgg ctgcggtgtc gctggtgttg tccgcgtgtg gtaacgacga caatgtgacc 300
gggggaggtg caaccactgg ccaggcgtcg gcaaaggtcg attgcggggg gaagaagaca 360
ctcaaagcca gtgggt 376
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<210> 12

<211> 393

<212> DNA

<213> Mycobacterium tuberculosis

<400> 12
 atactcaagc tttgccgacg agcggggcgat gttgatgacg ggaaacccca gcgcacaacc 60
 gacgattttg gcgtagccgg cggacgtctg ctcgattccg atcacgtcgg cgctcgcac 120
 gagcatggcg ccggcgacgg ctagcagcga tccgccgctg tcgaggagca cgacacgagc 180
 cgtacgcccg gccgtaagcc gcgcccagga ttcggcgaaa aaccgttcta cgtggcgggt 240
 gtactgggtg tcgaatgatt cgtgggggtg gtaggcgtcg ctgcaatcgt cgacatagat 300
 gccgtcgggc cgcacgcgt cgacaactcc gggtgagtgg aatagcactt gccgatcacc 360
 gcgacgttgc gcgcatgagg ccgaaccgga ata 393

<210> 13
 <211> 272
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 13
 tcctatgtcc ctgccgagca ngtgatcgaa cgcgggtgaca gattttgtcta tcctggacct 60
 gacgggtgagg tcgaagtttt ccaggaattc ggcaaaatcg gtaagagcct gaagaattcg 120
 gtatcgccgg acgaaatctg cgacgcatac gggggcatat acgcttcggg ttacgagat 180
 gtcgatgggg ccgctggagg cttcacgtcc atggggccaca aaggatgttg tcggcgcgta 240
 ccgtttttctg cagcgggtgt ggcgcttggc cg 272

<210> 14
 <211> 286
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 14
 atactcaagc ttgattccgc cgaaaccgac cgtgagcacc ccgccagcca ccacgctcgg 60
 gtcggggccc gggcccgggc cgccaggctg ctccgctcgg tgatggcacg ccaccgcgac 120
 accaccggc tgcgctacgt ctaaccattc caggcggagc tacatcagct cggccgcca 180
 gtgttcgggc cctctttcca ggtcgaagtc tataccgata tgcgcatccg cagccgccac 240
 cctggagaac agaacgatgc cctactaatg cttgtctggc ggggcc 286

<210> 15
 <211> 357
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 15
 ggtacgcttc ggtcgcagtc tgcgagtgat gcatgacgac cgggacctcg tcggcatctt 60
 ccatagcccg ccacaccttc agttgtctac cggaatccaa ccggtagaag gtcggcgagc 120
 gctcggcatt ggtcatcggg atatgccgt cgggacggtc agagccctcg ggtccggcca 180
 gcaactccga ggcttcgtcg ggggtggtcg gacgcgcatg ggccaccatc gcattcacca 240
 ggtctgcgcg aatcaccagc acgtagacgg ttcttttctt aagcaacacc gaagtttcag 300
 gacccgaatg ctccgggaaa catgtcacgg taggtcggtg ttccggctac cggctga 357

<210> 16
 <211> 83
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 16

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ggcgtcaacg gtgtcggaac ccggtcaag caattggtag gcctgcagtc tgtgaatcag 60
gccgacgctg tggccgcccgc ggc                                     83

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<210> 17
<211> 383
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 17
ggctngcgta cccggtaccg gccgcggggc taccacgtgc cggaactgga agcgcagtaa 60
gccctcaacg cgccaccgct ttggcccgcg cgcgcggcgt aggcgcacgc gcggtggccg 120
tggggcggcg cactgcgacc tcaccagcgg ctttcgagct ttgttcgacg aaccggccag 180
catggtcgan gatgcattcg agaccatatt cgaaattggt ttcacgcggg gccccgatcc 240
gatgccccct ccagttgcg tgagcaanca gcggagtcnt cgcgggacgc atggccacgg 300
ggtgttcaat ggcggatggt ccgctgcccg ccgactggct cttgcgggag aaccgatcta 360
gcaccaccga tccgcgcacg tng                                     383

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<210> 18
<211> 603
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 18
cgtaatntcg cgcacanca ngacttctgg ggggatcngc tgacagtggg nggatcccaa 60
attgcggatg atcgggcccgc cnacgtcggt gtgtacctn tcngtcacaa cnaanccgaa 120
ncgtatgact cgggtccacgc ggtgcggcac atggtggaca ccacaccgcc accgcncggg 180
gtgaaggcct atgtcaccgg tccggcaaca ctcaatgccg accaggccga ngccggacac 240
nanagtatcn ctaacgtcac cgcgatcacg agcatgggta tcgnncaatg ttntctantga 300
tctatcgctc cgtaattacc gcggttctcg tcttgatcat ggtcgcancg aactccggcg 360
caatccgcgg attcatcgnc ttgctcgccg atcacatatt ttcagccttt cacattgcaa 420
cnaacctgct cgtctcatgg ngatgcggcg acacggacta ccgatatcat gctcgccggt 480
acacaatcnc gccacgcccgc gaagacngga aacgcttcta cacaatnttc ncgggacgcc 540
actnaacttg gttcngggtt gacattgccg cgcagtntg cccagctttg ccggctcccc 600
tta                                     603

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<210> 19
<211> 190
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 19
tgaatttccc gatcccacaa tctcggttca gatacaggtc gccatacccc ttacttcggc 60
aacgctgggc ggattggccc tgcnctgca gcanaccatc gacgccatcg aattgcccgc 120
aatctcgttc agccaatcca taccatcgca cattccgcgc atcgacatcc cggccttcnc 180
cctttaacgg                                     190

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```

<210> 20
<211> 506
<212> DNA
<213> Mycobacterium tuberculosis

```

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<400> 20
aacagctatg accatgntta cgccaagcta tttaggtaac actatanaat actcaagctt 60

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ttacggtgat	cgcgcatcac	ctggttcatg	aactggaagc	agcgcanccg	ttccttttcg	120
gccgcaacat	gagccagcct	ctcgtcgcgc	gtcnggtgca	ggtgctcggg	cagctcggcc	180
gcgacagccg	cctgaccctg	aaaccagctt	ccatatcccg	cgacnaacna	cncagtcgg	240
ctacgtaacc	cctccgcgac	tgtccatgga	caacagcgcg	ttctccaccg	accggggccc	300
ggtgtggggg	gtttcggcga	ccggcagcca	ggtgggtccac	actgccgacg	ggcgccgcga	360
gccgttcacc	gaccaagccg	ccgaacaagt	ccgcccgatc	gcatactcca	accggttgcg	420
gtactgcagg	tcagctggcg	tacctcctcn	tcncgctcgg	cgaagtcttg	ctccancacg	480
tcgcagaacg	gcaaggaaca	cgttca				506

<210> 21

<211> 388

<212> DNA

<213> Mycobacterium tuberculosis

<400> 21

gaccgnncca	tgtttccaca	atgtggtgcc	agtnccgngg	ctacgtgcc	tcnanacact	60
ggcgccaggt	atcgccaccg	ttatcngcta	cgaacaaatc	ncggtatgcg	ttcttttanca	120
tgagtcggcg	accgncgatc	atggtcgaca	cccacgaacg	aaatacgag	atcgccntcn	180
agcntgtgtg	ccgcggtatta	tcangactga	cctcctggct	gaccggnntg	tntggtcgcg	240
atgcctggcg	cccggccggc	gtgntcgtgg	tcggctcggg	tagcgaagtc	agctaattct	300
cgtggcagct	cgaaagggtc	ctgccgggtgc	cggtctttgc	gcaaaccatg	cncatgttac	360
ggtccctcgg	gtgcggcctg	gcggcggc				388

<210> 22

<211> 138

<212> DNA

<213> Mycobacterium tuberculosis

<400> 22

gggatggggc	ggcccgtata	actcttcgtg	ttccactaac	tccgggaggg	ncaatctcgg	60
gccgttatgg	ctcacgtcgc	gtcgccctcc	gaccgcgaac	attcgagatt	ggcagcaacc	120
tggtagcacc	ctggccgg					138

<210> 23

<211> 142

<212> DNA

<213> Mycobacterium tuberculosis

<400> 23

nccgtcggtg	acaagtaaat	atgtccgcaa	aagtctcagc	ggccgacttt	gctcgcaggt	60
ggcggtaccg	cgccaccgag	tcgatgccgt	ggtcgcggaa	gaatgcctcc	cgaaatcgca	120
cggccttccc	nntttaaacg	ga				142

<210> 24

<211> 441

<212> DNA

<213> Mycobacterium tuberculosis

<400> 24

tttaggtgac	actatagaat	actcaagctt	ttggtctagc	cggccgagca	cgatacgggt	60
gtcattggcc	accggcgggc	gctgtccggg	aaatggcggg	tccccggtgg	ttttgctgat	120
gagtgtgtaa	ccgtantcga	agtggggcgc	gtcagactcc	acccanccag	caggcagcgc	180
gaagctgaat	cctccaaccg	ggttgtcnat	ccggacaagt	tgggggtgcgt	ttggggcaat	240

gacaggtggc	ngcgggtgcgt	tccgggtccgc	cgccggaagt	gctgcgttgg	gatccccgc	300
tgggcattcg	gcntttttgc	ggcggccggg	ggtngggggg	caacaggtnt	cccngtgccg	360
gtggcgctca	acggtcnacg	gcgcaagccg	ccgttggttg	taccnggggc	gctgggtccg	420
gatcgcggtg	gcggtcnccg	g				441

<210> 25
 <211> 453
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 25						
ctacaccatc	gaatacgacg	gcgtcgccna	ctttccgcgg	taccgcgtca	actttgtgtc	60
gacctcaac	gccattgccg	gcacctacta	cgtgcactcc	aactacttca	tcctgacgcc	120
ggaacaaatt	gacgcagcgg	ttccgctgac	caatacggtc	ggtcccacga	tgaccagta	180
ctacatcatt	cgcacggana	acctgccgct	gctagagcca	ctgcgatcgg	tgccgatcgt	240
ggggaaccca	ctggcgaacc	tggttcaacc	aaacttgaan	gtgattgtta	acctgggcta	300
cngcgacccg	gcctatgggt	attcnacctc	nccgcccaat	gttgcgactc	cgttcggggt	360
gttcccanaa	gtcnccccgg	tcgtcatcgc	cgaanctctc	ntcccgggac	ccacagggaa	420
tcngcnatth	cncctacaaa	tcancacact	cca			453

<210> 26
 <211> 228
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 26						
gcatgatcgg	ccaccttttcg	ggccgcccgg	catacggcgg	cgtaccgatc	tccgcgtcat	60
acaccgcggg	gtaatcgccg	acggtgccgg	ttcgcgagcc	gaaggtgacg	actctgattg	120
aatcgagttc	caggtccagc	gggtggcgca	ccaacggcgc	gagctcaacg	acgtcaatcn	180
cgttgctcgt	ttctacggtc	accgacctgt	gtgaccgtag	ttcncccg		228

<210> 27
 <211> 357
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 27						
gacactatag	aatactcaag	cttgccaacc	gccagcctgc	atccggcggc	gancactgct	60
ccgccgacca	gtacgaacca	acctgcgggtg	cccaggccat	tgacgatgtg	ctggtcggcg	120
cccgcgagtc	cgcgcaccat	caacgcgcgc	ggcaccacca	nggcggcccc	acctgcacg	180
gcgacgatca	ttccggcgcc	gtcacggcg	ggcggggctc	gaacangcac	agcatcaacg	240
tngtaccccg	gccgtgaccg	gcccgcacgc	tcacaccacc	caagcccatt	gccgtcctcc	300
tcaacngggc	gacccgcccc	gcacgtctac	acggnctaag	gccattgccg	tcctcct	357

<210> 28
 <211> 384
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 28						
tcggcgccat	cggcaccttc	gaggacctgt	atttcgacgc	cgtggccnac	ctgaggttgg	60
cgggtggacna	agtgtgcacc	cgggttgatc	gctcggcctt	gccggatgcc	accnngcgcc	120
tggtgggtcga	tccgcnaana	gacaanttgt	ggtggangct	tctgctgcct	gcgacacca	180


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cnacgtggtg gcaccgggca gotttagctg gcatgtcctg accgcgctgg ccgacnactc 240
cagacnttcc acnaanggtc gccnncccaa tgtnccg nan tgtctccggn tccctttacc 300
ncccaatggg cngnttccac nggttacggg ccccntnccg gcgggtctnc ctcccaanct 360
accaaatacg cccgacnttc cgga 384

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<210> 29
<211> 266
<212> DNA
<213> Mycobacterium tuberculosis

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```

<400> 29
atactcaagc ttttatggtg atcgcgcctc acctggttca tgaactggaa gcagcgcagc 60
gcttcctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg caggtgctcg 120
ggcagctcgg ccgcgaacag cccggcttga accctgaaaa ccngctttcc atatcccgcg 180
acgaaagaac gccagttccg ctacttaacc cctccgcgaa ccgtccatgg acaacagcgc 240
gttctccacc aaccgggccc ggggtgt 266

```

```

<210> 30
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 30
tcggctcagg ccgcgctgct ggtagagtcg ctgaccgggtg caggtttctga caatgtgggtg 60
ccggttcggc ggctacgtgc catcgagaca ctggcgaggc ctatcgacc cgttatcggc 120
tacgaagcaa atcgcggtat gcgttcttga gcatgagtcg gcgaccgtcg tcatggtcga 180
caccacgac ggaaagacgc agatcgccgt caagcatgtg tgccgcggat tatcaggact 240
gacctcctgg ctgaccggca tgtttggtcg cgatgcctgg cggccggccg gcgtggtcgt 300
ggtcggctcg gatagcgagg tcagcgaatt ctctgtggcag ctcgaaaggg tcttgccggg 360
gccggtcttt gcgcaaacaa tagcgcaggt tacggtcgcg cgggggtgcgg cctggcgggc 420
gcc 423

```

```

<210> 31
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 31
caagctattt aggtgacact atagaatact caagcttcgc gtctacgccg gcccgaggca 60
tccgcacagc gctcagcagc cggttccgta cgantcaag caggtggcgc aatgaccgaa 120
accacccag ccccgcaaac cccggcgggc cggccgggc ccgcacaatc gttcgtggtg 180
gagcggccca tccanaccgt tgggcgccgt aaggangccg tggtagaat gcggctggtg 240
ccggcaccg gcaagttcga cctcaacggc cgcagcttgg angactactt cccaaacaag 300
gtgcaccagc agttgatcaa ggcacccctg gtcaccgtgg atcgggtgga aagtttcgac 360
atctttgccc acctggggcg cggcgccgt cgggtcaggc cgggcctgcc ctgggtatcg 420
ccgggcatt gattctggtg tcccngaag aaccg 455

```

```

<210> 32
<211> 371
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 32

```

cggttggtcca	ccgcttctgc	ggtgccgcgc	ccgtcgacaa	tgaccgtgtc	gtccttgctg	60
accaccacgc	gtcggggccga	gccagcacc	tccaagccca	cctcgcgag	caccatgccg	120
gcgtcggggt	tgaccacctg	gccaccgcgc	accaccgcca	ggtcctcaag	gaaacgcctt	180
acggcggtca	ccgaagtacg	gcccttgac	cgcgaccgct	ttcaacgtct	tgcgaatcgc	240
gttgacgacc	agcgtcgcca	acgcttcgcc	ctccacgtct	tcagccacga	tcagtagtgg	300
cttaccggtt	cctgcaacct	tttcagcaa	tggcaacaga	tcgggaagcg	anctgatctt	360
gtcttggtgc	n					371

<210> 33
 <211> 320
 <212> DNA
 <213> Mycobacterium tuberculosis

ccaagctatt	taggtgacac	tatagaatac	tcaagctttt	ggctgggtcg	ccttcgaatt	60
cngcgtgcac	cgctatgggt	tgancagcg	gctggcgccg	cacacccac	tgccccgggt	120
gttttcgccc	cgaaccgga	tcatggtgag	cgaaaaggan	attcncctgt	tcgatgctgg	180
gattcgccac	gccaaggcat	ctanogatta	ctctcncgg	ggtgggaaaa	gtgcccaatc	240
ccccccctc	caactttccn	aacaatcatt	ccggttcnc	cntccggttg	gnggtaaccn	300
nccaataaaa	ccccgcccg					320

<210> 34
 <211> 383
 <212> DNA
 <213> Mycobacterium tuberculosis

gcccgcncat	ggccaatccc	cgaagacatc	attggccagt	ggccgggccc	taacagggtc	60
cagcccccca	ccantgccgc	tcgaacatgc	ggtgcaaccc	attcgaggc	cggcaggga	120
agcaccgcgg	aagccgcaaa	gggtgcagt	tccgcgcca	ataatgtcgt	ccgcaaccag	180
atgcgctcna	aaaccncnc	ggcagtcagc	gcaccgcagc	cgangtcgaa	agacgtcntc	240
agcgcgccc	catggggtgc	caatcggcac	ggcaggtatg	ccgcgcgcaa	cccgaagcgc	300
tggtgcatgc	ccacggtccg	cangangcgc	ancaccgcgc	aatgccgaan	cccacgaaac	360
atcgggcgca	tccaccttca	acc				383

<210> 35
 <211> 275
 <212> DNA
 <213> Mycobacterium tuberculosis

atactcaagc	ttgcccagcc	gtcgatgaca	agaaatatgt	ccgcaaaaga	ctcagcggcc	60
gactttgtct	gcagctggcg	gtaccgcgc	accgagtcga	tgccgtggtc	gcggaagaat	120
gcctcccga	ttcgacggc	caattccatt	ccgggaagca	tccgcaatgc	cagctgcggt	180
tgccccctgc	cggccacggc	accacttgc	ggcattgcgt	ccacctgggc	cagcgccccg	240
ccgccaaatt	ccaaacaata	aaaattgcac	ccggc			275

<210> 36
 <211> 322
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 36

```

ccacccgtgt attttgggat gggcaaaaag gcggaagcacc gcgtagggccac gaacgccggg 60
agggacaatc tcggggcggt agggcttctc gcggaagcgc ccgaacgtac ggcgtttcaa 120
cacgtcgcgt cggcctccga ccgcgaacat tcggggatgg cagcaacctg gtagcaccct 180
ggccggggcga tgatctgcag cgtcgccgcg ggtagtcgcc gcccgggcgg ctacagtctg 240
aaacgcgatg accatcgatg tgtggatgca gcatccgacg caacggttcc tacacggcga 300
tatgttcgcc tccctgcccc gt 322

```

<210> 37
 <211> 167
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 37
ctgcccattgt ttggggagcg ccgaccagcc gatgctggag gcctacacgg cccttgggtgc 60
gctggccacg gcgaccgagc ggctgcaact gggcgcggtg gtgaccggca atacctaccg 120
cagcngacc cctntcncaa naggatnttg ttcgcgggac ccnctc 167

```

<210> 38
 <211> 287
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 38
ccgactttcc gcggtacccg ctcaactttg tgtcgaccct caacgccatt gccggcacct 60
actacgtgca ctccaactac ttcacctga cgcgggaaca aattgacgca gcggttcgcg 120
tgaccaatac ggtcggtccc acgatgaccc agtactacat cattcgacg gagaacctgc 180
cgctgctaga gccactgcga tcggtgccga tcgtggggaa cccactggcg aacctggttc 240
aaccaaactt gaaggtgatt gttaacctgg gctacgcgac cgccttt 287

```

<210> 39
 <211> 322
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 39
atactcaagc tttgtcacac caagtgtttc gaccaggcgc tccatccggc gagtggatac 60
tcccagcagg tagcaggtcg ccaccacgct ggtcagtcg cgttcagctc gcttgccggc 120
ctgcagcagc cattcgggga aatacctgcc ctggcgacg tgggggatcc caacttcaat 180
ggttgcggca cgggtgtcaa attcacggtg gcggtagccg ttgccctaata tggaccgctc 240
atcgctgctt tcgcggtacc ccgccccgca cagggttcg gcttcagccc ccatcagggc 300
ggcaataaac ttcaagagca cc 322

```

<210> 40
 <211> 471
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 40
gaggcagctt cgccggcaat tctactagcg agaagtctgg cccgatacgg atctgaccga 60
agtcgctgcg gtgcagccca cctcattgg cgatggcgcc gacgatggcg cctggaccga 120
tcttgtgccg cttgccgacg gcgacgcggt aggtggtcaa gtccggtcta cgcttggggc 180
tttgcggacg gtcccgacgc tggtcgcggt tgcgccgcga aagcggcggg tcgggtgcc 240
tcaggaatgc ctaccgcgg cggcactgca cggccagtgc cgcggcgatg tcagccatcg 300

```

```

ggacatcatg ctgcggttca tactcctcga ccagtcggcg gaacagctcg attcccggac 360
cgcccagcgc attggtgatg gaatcggcga acttggccac ccgctgggtg ttgacatcct 420
cgacgggtggg caattgcgcc tcggtaagct ttgccgcgta gccttttcat c 471

```

```

<210> 41
<211> 247
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 41
atactcaagc ttactgaca agggacgaat tcgtcggccg cctgttcgac tgggtggtgg 60
ccgagctggt cgccaccact caggccgcgg tcacggcggg accggcgcgg gagcaaactc 120
gcgcgggcat ggccaacttc ttgcggacca tcaccgcaga cgcccgttc ggacccctgc 180
tgtccaccac acagttggcc aacgcattaa tcaccgcaa gcttgcgga tccaccgcc 240
tgttcgc 247

```

```

<210> 42
<211> 325
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 42
tccatcaccc gatgtggcng gagcactgcc atgtcgatct caactaccac ctccggccgt 60
ggcggttgcg cgccccggg ggtccgcgcg aactcgacga ggcggtcgga gaaatcgcca 120
ncaccccgct gaaccgcgac caccgcgtgt gggagatgta cttcgttgag gggcttgcca 180
accaccgat cgcggtggtt gccaaaatc accatgcgtt ggctgacggt gttgcctcgg 240
caaacatgat ggcacggggg atggatctgc cgccgggacc ggaggtcggc cgctatgtgc 300
ctgacccgc tcctaccaag cggca 325

```

```

<210> 43
<211> 221
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 43
agctttgcag ttgctgagta atgtcggcca acgtcaccac aaccgcgatg aattcaatca 60
tgccgcccag ggcggccaac ccaatggtgg ccgcgagcgg cagctcgatc gcagcgcgga 120
ggttgccggc cgccagttga ttacgaaca ggggtgaggtc ataggcgggc aggatagtga 180
cgaaggcaag acctccatct gccgtcggaa gaagtatcga g 221

```

```

<210> 44
<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 44
agcttcagaa caggcctggt gtgggcgcac ccggctcgcc gagttctgca cgcaccgcct 60
caagtgcggc ccgcaccgcc ggcattctcc ggtcacgcag ggccgcggcc cgcgcgcgag 120
cgacggcgtg ttgcgcgagt tcgcgctcaa tgatgctgac ctgatcggcc acccgggcgt 180
tctcggcgtc gtcgcgttca ctaatcgcg tgctcagcag cgtctcgaca gccaccacc 240
gagtggcgac cagctgctcc accacggacc gcagcgatgc ccgtc 285

```

<210> 45
<211> 179
<212> DNA
<213> Mycobacterium tuberculosis

<400> 45
ataactcaagc ttcagttcct ccacgacgcg ttcccaaattg aattttccga tcccacaatc 60
tcgggttcaga tacaggtcgc catacccctt acttcggcaa cgctgggcgg attggccctg 120
ccgctgcacc aaaccatcaa cgccttcaaa ttgccggcaa tctcgttcag ccaatccat 179

<210> 46
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

<400> 46
gctctacgcc gcctacgggt cgaacatgca tcccagacag atgctcgagc gcgcacccca 60
ctcgccgatg gccggaaccg gctgggttacc cgggtggcgg ctgacgttcg gcggcgagga 120
catcngctgg gaagggggcg ttgccaccgt cgtcnaagac ccaaattcga aggtgttcgt 180
cgtgctctac gacatgaccc cggcggacga gaagaacctt gaccgggtgg aaggctccga 240
gttcggtatc caccagaaga tccgatgccg cgtggagcgc atttcctcgg acaccacaac 300
gggatcccgt cctcg 315

<210> 47
<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

<400> 47
ataactcaagc ttgccaaaga gacctcgtcc accaagcagg acgcgaccgt cgaggtggcg 60
atccggcttg gcgtcgaccc gcgtaaggca aaccagatgg ttcgcggcac ggtcaacctg 120
cccacaccgg cactggttaa gaactgcccg cgtcgcggtt ttcgcggttg gtgaaaaggc 180
caatgcctgc gtttgccgtg ggggcggatg ttgtcgggag tgacaatctg atcaaaaagg 240
ttcagggcgg ttggctggaa ttcaatgccg caatcgcgac accgg 285

<210> 48
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 48
ccacggcgtg gatcaaggta ccggccggga tgttgcgcaa tggcagggtg ttgcccggt 60
tgatgtcggc gttagcgccg gattccacca catccccttg cgaaagtccg ttgggtgcaa 120
tgatgtagcg cttctcccca tcgagatagt ggagcaacgc aatccgtgcg gtacggttcg 180
ggtcgtactc gatgtgcgcg accttggcgt tgacaccatc tttgtcattg cggcgaaagt 240
cgatcatccg gtaagcgcgc ttatgaccgc cgcctttgtg ccgggtggta atccggccat 300
gcgcgttgcg tccaccgcga cgtgcagcgg gcgcaccagc gacttctccg gggttgaccg 360
ggnatctc 369

<210> 49
<211> 461
<212> DNA
<213> Mycobacterium tuberculosis

<400> 49

```
gcagcatgac ggcggtagcg aacaccgccg gatgcagcgc aagtagcgtc gatgtgctca 60
cggaatcgcc ccggcaccgc gatctcgang atcaccagtg ccaccccttg cagcgcnaca 120
ccgacgattc cgtacaccgc cagcccgatc aggccctggg ccatctgatt ggagctggcg 180
tanatggcgg cgatggtgac gatggccagc gccacataca ttgtggcggc cagaaccacg 240
gcgttggggc ggcggtcgat gaacactagg cgacgcagat cgcccggggc caacaggttg 300
accatcagaa agcctgcgac tagcacggcg gcgccactag gaagtacaag aangtggcca 360
ccaccccatg caggatcggg gtaaggctga tgggtccgaa atcgactccg gcctaataca 420
tgactctctc ctttgcgta tgccttact tgtgcgcgga a 461
```

<210> 50

<211> 127

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 50

```
gggacacacc tcgatgctgc cgcnatggac gcggtcgaac gcaagcagct gatcgagcta 60
caacgccgcg cggaacgctt ccgccgcggg cgtgacgcac cccgttgacc ggccggancn 120
ctctcta 127
```

<210> 51

<211> 305

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 51

```
tgggcgcctc tttcggcctt cccnntttaa acgnagcang acattctggg tatcgagttg 60
tactggatgg tgttggcgat gtcggtgatc ctgctcctgg cgggtgggatc cgactacaat 120
ctgctgctga tttcccggtt gaaagaggaa attggggccg gattgaacac cggaattatc 180
cgtgccatgg ctggtaccgg gggagtgggt acggctgccg gcatggtgtt cgccgttacc 240
atgtcgttgt ttgtgttcag cgatttgcca attattggtc agatcggtac caccatcgcc 300
ttccc 305
```

<210> 52

<211> 449

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 52

```
ccgatcggcg ccgcantcgg ttggtgttnc ggatgaatcc gcagcgaaaa tgtagctgcg 60
gtggcgtgtc gtgactcgtn ggcgtcgacg ctcggtggcag ccaccgancg gttgggtccag 120
gatctggatg ggcaaagtgg tgcggcccg cgggtgacgg ccgatgagct gaccgaggtc 180
gacagcgccg tgttggctga cttggaaccg acatggagtc gcccgggttg gcgtcacctc 240
aagcatttca atggttatgc gaccagtttt tgggttacgc cgtcagacat cacgtcggag 300
acttggatga gctgtgtctg ccagatagcc ccgaatcggg acgaccgtgg tcacgggtgcg 360
tctgaccact cgggtcgggt cgcccgcgct atcggcatgg gtgcgtnatc acagcgacac 420
gcgcctgccc aaggangtnc ggnccgacc 449
```

<210> 53

<211> 160

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 53
 cggggttgagg atccacgcgt gggggttggtc agcagctacg gcactgaacc ggcggccacag 60
 ctgcgcgacg cgcttttcggg ggttctcgat cgactcgccg taggcgatgc gcagcgccgtg 120
 ctgcaatata ggggtacacgt aggcgggcct tcccncctta 160

<210> 54
 <211> 308
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 54
 cttgattttg atcatcatga cgatcatcac cctaattttg ctaccgcac tggttatcgt 60
 gggtagcgtc gtgctttcca tgggcgcctc ttccgggctt tccgtattgg tctggcagga 120
 cattctgggt atcgatttgt actggatggg gttggcgatg tccgtgatcc tgctcctggc 180
 ggtgggatcc gactacaatc tgcgtcgtgat ttcccggtg aaaaaggaaa ttggggccgg 240
 attgaacacc ggaattatcc gtgccatggc tggtagcggg ggagtgggta cggctgccgg 300
 catggtgt 308

<210> 55
 <211> 460
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 55
 ggggatccct agatcgacct gcaggcatgc aagcttgagg tgctgttcca acccgaattg 60
 gctttcggcg ccacgcgtga ggcgggacac acctcgatgc tgccgccatg gacgcggctg 120
 aacgcaagca gctgatcgag ctacaacgcc gcgcggaacg cttccgcccgc gggcgtgacc 180
 gcatcccgtt gaccggggcg atcgcggtga tgcgtgatga cggcatcgcc accggagcna 240
 ctgtcaaggc ggcgtgccag gtcgcccggg cgcacgggtg ggacaagggt gtgctggcgg 300
 tcccgatcgg cccagacgac atcgtggcga gattcgncgg gtacgccgat gaggtggtgt 360
 gtttggcgac gccggcgtn gttcttcgcc nccggcangg ttaccgcaac ttcaccaga 420
 cctccgacga cgagggtggt gcgtctcctg gatcgtgctc 460

<210> 56
 <211> 299
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 56
 aaggctgcag gtcgaagcgg ntggttacga ctccctgtgt gtgatggacc agttctacta 60
 tctgcgtcta cacggccctt ggtgcgctgg ccacggcgac cgagcggctg caactgggcg 120
 cgttggtgac cggcaatacc taccgcagcc ccgaccctgc tggcaaagat natcaccag 180
 ctgcagctgg ttagecgccg tcgagcgatc ctcggcattg gacccggcgg gtttgaactg 240
 gaacaccgcc agctcggctt cgagtcgggc atttccagt accggttcaa ccggctcga 299

<210> 57
 <211> 373
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 57
 ctttcgcggg taccgctca actttgtgtc gaccctcaac gccattgccg gcacctacta 60

cgtgcactcc	aactacttca	tcttgacgcc	ggaacaaatt	gacgcngcgg	ttccgctgac	120
caatacggtc	ggtcccacga	tgaccagta	ctacatcatt	cgcacggaga	acctgccgct	180
gctacagcca	ctgcgatcgg	tgccgatcgt	ggggaaccca	ctggcgaacc	tggttcaacc	240
aaacttgaag	gtgattgtta	acctgggcta	cggcgacccg	gcctatgggt	attcgacctc	300
gccgnccaat	gttgcgactc	cgttcggggt	gttccagang	tcagcccggg	cgtcatcgcc	360
gacgctctcg	tcn					373

<210> 58

<211> 338

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 58

cggtcatagc	cctcgggtcc	ggccagcact	ccgcaggctt	cgtcgggggtg	gtcgcgacgc	60
gcatggggcca	ccatcgcat	caccaggctt	gcgcgaatca	ccagcacgta	gacggttcct	120
ttcctaagca	acaccgaagt	ttcacgaccc	gaatgctccg	ggaaacatgt	cacggtaggt	180
cggtattccg	gctaccggct	gagcattgag	cacgcgggcc	agcaccgcac	gagccaggca	240
atcagccgcc	gccgcaccga	tgcgggtgac	cagctgagtc	tccggagaca	atgcggccgg	300
cacgcgggnc	tccggcggca	ccgctacngc	gcccgtgg			338

<210> 59

<211> 374

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 59

gtgatggcac	gccaccgcga	caccaccggg	ctgcgctacn	tcgagccata	ccgggcccggag	60
ctacatcggc	tcggccgccc	agtgttcggg	ccctctttcg	aggtcgaggt	cgataccgat	120
ttgcgcatcc	gcancgcnc	cctggacgac	agaaccgtgc	cctacgagtg	cttgtcgggc	180
ggggccaaag	aacagcttgg	catcctggcg	cgattggccg	gcgcggcgct	ggtcgccaag	240
gacgacgccg	ttccggtgct	gacgacgac	gcgctggggg	tcaccgatcc	ggagcgacta	300
tcaagatggg	ggaggtctct	gacaccatcg	gccccnacgg	acatgtgatc	gtgccgacgt	360
gcagtcaccac	cccc					374

<210> 60

<211> 448

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 60

gcgaaagtcc	gttgggtgca	atgatgtagc	gcttctcccc	atcgagatag	tgagcaacg	60
caatccgtgc	ggtacggttc	gggtcgta	cgatgtgcgc	gaccttggcg	ttgacaccat	120
ctttgtcatt	gcggcgaaa	tcgatcatcc	ggtnngcgcg	cttatgaccg	ccgcctttgt	180
gccgggtggt	aatccggcca	tgccggttgc	gtccaccgcg	accgtgcagc	gggcgcacca	240
gcgacttctc	cggggttgac	cggtgatct	cggcgaaatc	agatacgctg	gcgccgcgac	300
gaccaggcgt	cgtgggcttg	tncttgcgaa	ttgncatgtc	taatcangtc	tttctctcac	360
gctctcgtcg	ccgggctagg	ccgcattgcc	ctgctctctc	tcatecgctc	gctctgcate	420
gtccccgggc	taagcccgtg	ccccgaaa				448

<210> 61

<211> 356

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 61
 gatggttcgc ggcacgggtca acctgccaca cggcactggt aagactgccc gcgtcgcggt 60
 attcgcggtt ggtgaaaagg ccgatgctgc cgttgccgcg ggggcggatg ttgtcgggag 120
 tgacgatctg atcgagagga ttcagggcgg ctggctggaa ttcgatgccg cgatcgcgaa 180
 caccggatca gaatggccaa agtcggtcgc atcgctcggg tgctgggtcc gcgcggcctg 240
 atgccaacc cgaaaaccg caccgtcacc gccgactccc catggcgtcc cggatatcaa 300
 gggccggcaa atcaacttcc cggttgatca gcaaggcaac ctgcctccnc ctccgg 356

<210> 62
 <211> 336
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 62
 atactcaagc ttcgtcataa gaccatggtg cgctttcttt cacccgcca gagtcggggg 60
 catccgcacc ggctcgcatc gcatcactct ccacgacgg gccgctcatc agcttggggc 120
 atttcaatgt acttgatacc ccgcgctgcg ggtaggccac tgcgacaatt caaacacggg 180
 gtcacacggg gaatagtgtc gagatgggct ctgatcaacc gtcgcaaacc cggtttcgca 240
 tcaatagcgg aatcccaccg ggttgcatgg aggctgctga ccttgaaaaa caaaattttt 300
 tcattacaac aaaacaaccg ccncggaaac tttgca 336

<210> 63
 <211> 489
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 63
 cgaattcggc gtgcaccgct atggggttgca gcagcggctg gcgccgcaca cccactggc 60
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 tgctgggatt cgccaccgcg aggccatcga ccgattactc gccaccggg tgcgagaggt 180
 gccgcagtc cgtccgctcg acgtctccga cgatccatcc ggcttccgcc gtcgggtggc 240
 ggtagccgtc gatgaaatcg ctgccggccg ctacctgcaa ggtgattctg tcccgtttgt 300
 tcgaagtgcc tttcgcgcat gactttccgt tgacctaccg gctggggcgt cggcacaaca 360
 ccccggtgag gtcgtttttg ttgcagttgg gcggaatccg tgctctgggt tacagccccg 420
 aactcgtcac ggcgggtgcgc gccgacggag ttgttatcac cgatccgttg gccgtaccgc 480
 gccttgggc 489

<210> 64
 <211> 448
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 64
 tcagactcca cccagccagc aggcagcgcg aagctgaatc ctccaaccgg gttgtcgatc 60
 cggacagggt ggggtgcgtt tggggcaatg acagggtggc gcggtgcgtt cgggtcggcc 120
 ggcggagggt ctgcgttggg atcgcccgcc tgggcattcn gcgtgttggc ggcggccggg 180
 ggtggggggg caacagggtg cgccgggtgc ggtggcgctg cagcggtcga cggcggcgaa 240
 gcggccgttg tgggtaccgg gggcgctggc tccggatcgg cgttggcggt cgcgggcacc 300
 gcaacggtca ccaagctggc gctggccatc gccgcgatag ccagtgcgc caatcgccc 360
 ttgcgacgtg tcaagtngg gtccacctga tgcattggca aagaacctac cgtgttaacg 420
 gcncaacnca aggaccgcgc cggtcgcn 448

<210> 65
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 65
tttccgcggt acccgctcaa ctttgtgtcn accctcaacg ccattgccgg cacctactac 60
gtncactcca actacttcat cctgacgccg gaacaaattg acgcagcggg tccgctgaac 120
aattcgggtcc gtcccacgaa agaaccagtt ttncntcttt cncacggaga acctgccgct 180
gctagagcca ctgcgatcgg tgccgatcgt ggggaaccca ctggcgaacc tgtgtttcaa 240
ccaacactta gagtgttaatt gtaaacctgg gctaggggaa accggctcta gtttttccac 300
cntctccgcc ccntgttttcg aatactccgt tcgggttgtc cccaaa 346

<210> 66
<211> 277
<212> DNA
<213> Mycobacterium tuberculosis

<400> 66
gcttccgggt cgtatgttgt gtggaattgt gaccggatac caatttcaca caggaaacag 60
ctatgaccat gattacgcca agctagttag gtgacactat acaatactca agcttgccgg 120
ctgggtgggcc gaccacttcg atggcacgac ccgtgaactg ctgcccggcc aattcttctt 180
ggtcgcccgg accgatggac cgcggctggg attccagaag gtgcccgatc ccgcccctgg 240
gaaaaaccgc gtgcacctct acttcacgac caacgac 277

<210> 67
<211> 434
<212> DNA
<213> Mycobacterium tuberculosis

<400> 67
ccgatcgact gatgcgccga caaccacgcc ccaacaactg .gaatgaaccg tcgtgaccat 60
catcagcacg cggttgtagg cgacttgcca catgttcaac ccgccgtact cggacggaat 120
cttcaaaccg aaacagccca gctcgccag gcctttcacg tactcgtcgg ggatctgggc 180
accacgctcg aggacgctgc cgtccacggt gtctaggaat tcccgagtt tgaccagaaa 240
cgctcgggtt cgggcctcct cggcgccga cggcttgga aatgggtgta tgagccctac 300
gggaaaccgg ccacaaaga gttctttggc gaaggacggt ttatcccaac cactttcgcg 360
agattcctcg gcaagggccg gcgcttgctc ctcggtgacc tgagtttgct gtgccatcgc 420
cgctcctcc ctga 434

<210> 68
<211> 465
<212> DNA
<213> Mycobacterium tuberculosis

<400> 68
tgcacccggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagcttttac 120
ggtgatcgcg catcacctgg ttcatgaact ggaagcagcg cagcgcttcc ttttcggccg 180
caacatgagc cagcctctcg tcggcggtcg ggtgcagggt ctcgggcagc tcggccgcga 240
cagccgcttg accctgaaac cagcttccat atcccgcgac gaacgacgcc agtccgctac 300
gtaacccctc cgcgactgtc catggacaac agcgcgttct ccaccgaccg ggcccgggtg 360
tggggtgttt cggcgaccgg cagccagggt gtccacactg ccgacgggcg ccgcgagccg 420
ttcaccgacc aggccgccga gcaagtccgc ccgatcgcat actcc 465

<210> 69
<211> 463
<212> DNA
<213> Mycobacterium tuberculosis

<400> 69
gggggcgctg ctggtatagt cgctgaccgg tgcaggtttc gacaatgtgg tgccggttcg 60
gcggctacgt gccatcgaga cactggcgca ggctatcgca cccgttatcg gctacgagca 120
aatcgcggtg tgcgttcttg agcatgagtc ggcgaccgtc gtcatggtcg acaccacga 180
cggaaagacg cagatcgccg tcaagcatgt gtgcccggga ttatcaggac tgacctcctg 240
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ggatagcgag gtcagcgaat tctcgtggca gctcgaaagg gtccctgccg tgccggtctt 360
tgcgcaaacg atggcgcgag ttacggtcgc gcggggtgcg gcctggcggc ggccagagca 420
cgagttcacc gatgcgcagc tagtggcgac agcgtcagcc aac 463

<210> 70
<211> 447
<212> DNA
<213> Mycobacterium tuberculosis

<400> 70
tgcttccggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagcttccgt 120
acaggtcgcc tccaacacgg cggggaagcg acaccagcct accgagcttg gagtccagga 180
cgccagcggc ggcgtcggtc tgcgctcgtg tgccgcgggg gtggcgtttg ctggcaacga 240
tctccaccca gccggtcggg ttacccacga tctcggcata gacgcggggc gaggcgggtg 300
cgataccgta ttgcgtcaat tgggacgcgg ttgtgcattc ggctagctcg gttgccacac 360
ccgtcagggg ttcgacgttg gcgggttcgg cgggccccag caccgctgtc accatgcccg 420
ccaagccgac ctgcggcgcc accaact 447

<210> 71
<211> 460
<212> DNA
<213> Mycobacterium tuberculosis

<400> 71
cggcatgacc accgacaggc ccgactggtc gtaccactcg aacgccgggg tgttgatgtc 60
ccagccgctg aagtcgtcct gcgcgcgcag gccgtcgagc aggtacaggg cgggcgagtt 120
ggcaccacca ctttggaatt ggaccttgat gtcacggccc atcgacggcg acggcacctg 180
caggtactcc accggcaagc ccggccggga aaatgcccc gcggtcgccg tgccaccgac 240
ggcgccgacc agaccgcaga ctagggccgc gccgacggcc ccgaccacga gtcgacgcga 300
catacccgty acggcgccac gaacctgtc aacaagctgc attcttgctt ccctcctcct 360
catctcaacg catccatgca tgtttgggcg catcctgaat tangtcagac tgcaggcgct 420
gggcggcgag tgctcgtgta tcaaccacaa cttcgggcgt 460

<210> 72
<211> 404
<212> DNA
<213> Mycobacterium tuberculosis

<400> 72
ttccaaccct aattggcttt cggccccatc cgtgaggacg ggggtgcgggt gctcaacaac 60

aacgtcgtcc	gcgggacaca	cctctatgct	gccgccatgg	acgcgggtcca	acgcaagcag	120
ctgatcgagc	tacaaccccg	cgcggaacgc	ttccgcgcgc	ggcgtgaccg	catcccgttg	180
accgggcgga	tcgcggtgat	cgtcgatgac	ggcatcgcca	ccggagcgac	ggccaaggcg	240
gcgtgccacg	tcgcccgggc	gcacggtgcg	gacaagggtg	tgctggcggt	cccgatcggc	300
ccaacgaca	tcgtggcgag	attcgccggg	tacgccgatg	aggtggtgtg	tctggcgacg	360
ccggcgttgt	tcttcgccct	cgggcagggg	taccgcaact	tcac		404

<210> 73
 <211> 465
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 73						
caggcatgca	agctttccgc	cgatacccg	catgtcgcgc	acatccagga	cttctggggg	60
gatccgctga	cagcggcggg	atcccaaagt	gcggatgac	gggccgccta	cgtcgtggtg	120
tacctcgtcg	gtaacaacga	aaccgaagcg	tatgactcgg	tccacgcggt	gcggcacatg	180
gtggacacca	caccgccacc	gcacggggtg	aaggcctatg	tcaccggtcc	ggcagcactc	240
aatgccgacc	aggccgaggc	cggagacaaa	agtatcgcta	aggtcaccgc	cgatcacnag	300
catggtgatc	gcagcaatgt	tgctagtgat	ctatcgctcc	gtaattaccg	cggttctcgt	360
cttgatcatg	gtcggcatcg	actcggccaa	tccgcggatt	catcgccttg	ctcgccgaac	420
acaacatttt	cacctttcac	atttgcacca	acctgctctt	ctcat		465

<210> 74
 <211> 387
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 74						
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gcaccgcttg	gccacnaacg	ccgggagggg	caatctcggg	cggctatggc	ttctcccggg	120
aaggcccaaa	cgtacggcgt	ttcaacacgt	cgcgtcgccc	tccgaccgcg	aacattcggg	180
gattggcacc	aacctgntac	cacctggcc	gggcgatgat	ctgcagcgtc	gccgcgggta	240
gtccccgcc	gggcggctac	agtctgaaac	cccgatgacc	atcgatgtgt	ggatgcagca	300
tccgacgcaa	cggttcctac	acggcggata	tgttctcttc	gctgcgccgg	tggaccggtg	360
ggtctatccc	ctgaaaccga	catcccn				387

<210> 75
 <211> 445
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 75						
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acggagtcaa	ctaccgggcc	aacggtgatt	tcttggccgc	cgctgacggc	gcgaacgacg	120
ccagcgacca	cattcagcag	atggccagcg	cgtgccgggc	cacgaggttg	gtgctcggcg	180
gctactccca	gggtgcggcc	gtgatcgaca	tcgtcaccgc	cgcaccactg	cccggcctcg	240
ggttcacgca	gccgttgccg	ccgcagcgcg	acgatcacat	cgccgcgac	gccctgttcc	300
ggaatccctc	gggcgcgcgt	ggcgggctga	tgagcgccct	gacccctcaa	ttcggttcca	360
agaacatcaa	cctctgcaac	aacggcgacc	catttggttcg	gacgggaacc	ggtgggaacg	420
cacctaagct	acttgcccgg	gatga				445

<210> 76
 <211> 345

<212> DNA
<213> Mycobacterium tuberculosis

<400> 76
gtttatgcac tggtttaggtg ttccatgag ttccattctg aacatccttt aatcattgct 60
ttgcgttttt ttattaaatc ttgcaattta ctgcaaagca acaacaaaat cgcaaagtca 120
tcaaaaaacc gcaaagttgt ttaaaataag agcaacacgt acacaaggag ataagaagag 180
cacatacctc agtcacttat tatcactagc gccgcgcgca gccgtgtaac cgagcatagc 240
gagcgaactg gcgaggaagc aaagaagaac tgttctgtca gatagctctt acgctcagcg 300
caagaagaaa tatccaccgt ggggaaaaac tccaggtaga ggtac 345

<210> 77
<211> 139
<212> DNA
<213> Mycobacterium tuberculosis

<400> 77
atactcaagc ttgggtgtag ccgatcacgc gaagtcncat gatcagccac gttccgcgcc 60
gcccggcata cgggtggtgta ccgatctccg cgtcatacac ccgcgggtaa tcgccgacgg 120
tgccggttcg cgagccgaa 139

<210> 78
<211> 298
<212> DNA
<213> Mycobacterium tuberculosis

<400> 78
agctttatcg aaagcgcgaa cagctcgcgg cggcccacga cgtgctgcgt cggattgccg 60
gcggcgagat caattccagg cagctcccgg acaatgcggc tctgctggcc cgcaacgaag 120
gactcgaggt caccgccgtg ccgggggtcg tgggtcacct gccgatcgca caggttggcc 180
cacaaccggc cgcttgatgc ccggtcggca agcccggcag ttgccaaacc catcgtgatc 240
aggctcggct cgcgagttcg gcgaagaaat ggttcgcctg atcacctacc atcggcca 298

<210> 79
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

<400> 79
tcaacacgcc gccagccacc acgcgcgggt cgggcgcgcg gcccgggcct ccaggctnct 60
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ggcggagcta catcggcccg gccgcccagt gttcggggcc tctcgcccag gtcgaggtcg 180
acaccgattt gcgcatccgc agccgcaccc tgcgacgaca gaaccgcggc cctaccact 240
gcttgtcggg cggggggcaa agaaccagct tgnatcctg ccacaattgg ccggcgcccc 300

<210> 80
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 80
caggcatgca agcttcacgt ccgtacggct cgggtacgct tcggtcgcag tgtgcgagtg 60
atagatgacg accgggacct cgtcggcatc ttccatagcc cgccacacct tcagttgctc 120

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accggaatcc aaccggtaga aggtcggcca gcgctcggca ttggtcatcg ggatatgccg 180
ctcgggacgg tcagagccct cgggtccggc cagcactccg caggcttcgt cggggtggtc 240
gcgacgcgca tgggccacca tcgcattcac caggtctgcg cgaatcacca gcacgtagac 300
ggttcctttc ctaagcaaca c                                     321

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<210> 81
<211> 340
<212> DNA
<213> Mycobacterium tuberculosis

```

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<400> 81
aatattcaag ctttcggcgg aaacggacnc cttgcgaaca ttgataacaa aatagaaatc 60
attgatgggt tgagtcacca ggccgatcaa gccttcgccg agccaaattc caatcaagag 120
gcccagcccc gtaccaatca gcccggcaac gagggattcc gtcnttatca gccnaataa 180
ctgctctcgg gtaccacca aacagcgcaa tatggcgaaa aacggtcgcc gttgcacaac 240
attaaatgtc tcggtattgt tgattaaaaa gataccacc accagggcaa tccaactgag 300
agcgggttaa ttgaccgtaa aaacctcccg tcctctgttt 340

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<210> 82
<211> 394
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 82
caggcatgca agcttgctgc atcttcctgt gactgctccc gaaacctggg ggtgtgcctg 60
ctgtgtatgc acggcatacg gacatccttc ccttgatacc cgcggtcgaa ccagccacgt 120
gtccatcatc aggggtcaac cccggccaag ggcgacggca cgccaagttc gccgaccgtt 180
aacctagtgc tgtagcttc atttgctgcg agcaaaacag ctggtcggcc gttaggaact 240
gaattgaaac tcaaccgatt tgggtgccgc gtaagtgtcc tgtctgcggg tgcgctggtg 300
ttgtccgcgt gtggtaacga cgacaatgtg accgggggag gtgcaaccac tggccaggcg 360
tccgcgaaag tccattgcng ggggaagaag acac                                     394

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<210> 83
<211> 487
<212> DNA
<213> Mycobacterium tuberculosis

```

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<400> 83
gaaagtgccc caaggtgttg gtgaaactcg ctggacggtc cccaggatgt tggcagcaca 60
ttcaccggac atgaccggag caagaccgga catcctccca taccgtcgtc gccgtgtaca 120
tccgtagccc gtcctggcag gtgctgggtt gaacaaaatc agcccaacac ctgccacgac 180
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cacggtggcc gccgtggcct ccaaggggac atttgctgtg gcgttcctat cccggccggt 360
cggcgcggcc gtctttggat actttggaga ccgcctcggc cgccagaaga ccctggtcgc 420
cacactgttg atcatgggcc tggcaaccgt gactgttggg ctggttccac gacagtggcc 480
atcgcgc                                     487

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<210> 84
<211> 418
<212> DNA
<213> Mycobacterium tuberculosis

```


<400> 84
atattcaagc tttgtcacac caagtgttcc gaccaancgc tccatccggc gagtggatac 60
tcccagcagg tagcaggctc ccaccacgct ggtcagtgcg cgttcacctc gcttgccggcg 120
ctgcagcagc cagtcgggga aatagctgcc ctggcgcgagc ttgggggatcg cgacgtcgat 180
ggttgccggca cgggtgtcga aatcacgggtg gcggtagccg ttgcgctgat tggaccgctc 240
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cggcgatgaa cgtcgagagc agcccgcgca gcaaataccg gctcgctgt gcgagttggt 360
cagccagaag ctgctcggtg tcataagatg agaagaggtc agtgcgtcct ttccttcg 418

<210> 85
<211> 399
<212> DNA
<213> Mycobacterium tuberculosis

<400> 85
caggcatgca agctttttga gcgtctcgcg gggcagcttc gccggcaatt ctactagcga 60
gaagtctggc ccgatacggg tctgaccgaa gtcgctgctg tgcagccac cctcattggc 120
gatggcgccg acgatggcgc ctggaccgat cttgtgccgc ttgccgacgg cgacgcggta 180
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ggccagtgcc ccggcgatgt cagccatcgg gacatcatgc tcgcgttcat actcctcgac 360
cagtcgcggc aacagctcca ttcccggacc gcccaacgc 399

<210> 86
<211> 474
<212> DNA
<213> Mycobacterium tuberculosis

<400> 86
atactcaagc ttttggtctg gtcgccttcc aattcagcgt gcaccgctat gggttgcagc 60
agcggctggc nccgcacacc ccactggccc ggggtgtttc gccccgaacc cggatcatgg 120
tgagcgaaaa ggagattcnc ctgttcgatg ctgggattcg ccaccgcgag gccatcgacc 180
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gaatccgtgc tctgggttac agccccgaac tcgtcacggc ggtgcgcccgc cgac 474

<210> 87
<211> 383
<212> DNA
<213> Mycobacterium tuberculosis

<400> 87
caggcatgca agcttcaacc tattgacgca ttgtgcgaac tgacggcgcc cgcgcatggc 60
caatccggaa gaccatcatt ggccagtggc cgggcgctaa caggttccag cccccacca 120
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ccgcccggc cagtcagcgc acccgacgag aggtcgagag acgtcgtcag cgcgcccaca 300
tggggtgcc atcggcacgg caggtaggcc gcgcgcaacc ccaacgcgtg gtgcatgcca 360
cggtcgcgag gaggccacca ccc 383

<210> 88

<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 88
atactcaagc ttcccggccg caggtgacgg cgcggcctag cgccacttga tgccgcaccc 60
gatcgacggn cgttggtcgg ggttgactgg ccgcccggcg agcagggcgt caaccgcggc 120
ccggacgtcg gcggccgtca ccggtcggcc attgcccggg cgggagtcgt cgagctgacc 180
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gcgggcctcg gcgaccatct gatcggggcc gtcctgcggg taggtgacca cgtccttact 360
ggagataccg accatcggga ccctttgatc ggcgaggtcc cggccgaccg tggccaatcc 420
ggcggcgacg tgtcgcccgt accggccagt ggttc 455

<210> 89
<211> 429
<212> DNA
<213> Mycobacterium tuberculosis

<400> 89
caggcatgca agctttanca ncatcaaccc cgccccgcac cagcaccgac acgatgtcga 60
tgccatcgag gtgaatgtcg aactggcnca aaccatctgg cgaccgcgac caccggcaac 120
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acctcgatca ccgagaccag ccggccgtta tactcacgca cccctaccgt gtcacgcca 240
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gccgaccaat ccgcaccca cgtcgccaaa cccgaaatca ccgtgatgcc gtggtaactg 360
accaccgaca gtaacgtcac tacggccgcc acgccgacgc cgaaccacca cgcacatgat 420
gatcggtcg 429

<210> 90
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 90
atattcaacc ttgcacacat tgacgatacc ttggtcacga gaccccaaaa gctggcctcc 60
accgcgcgcc ggggaccacg gtcatacctt gannngctt tcgatcgttg atgctgcgtc 120
ttggtccgcy gaaaccgcag gctggcatat gcacgtgggc gcaactggcg tctgcgatcc 180
ccaccgattc gcccgaaatc agctttcagc ggctcccaaa gttgatcatc gaccggctgc 240
cggatatccc gcaacttgcyg tggcgggtca ccggcgcccc gtcggactg gaccggccgt 300
ggttcgtcga ggaccacgaa c 321

<210> 91
<211> 134
<212> DNA
<213> Mycobacterium tuberculosis

<400> 91
caggcatgca agcttcatgc ccgcggcatg atagccacat gcacgcaatc gaactcagcy 60
aaaccggcgg gccaggcgtc ttacgccacc tcaccagcgc gcaacctcaa cccggccacg 120
gagacctcct gatac 134

<210> 92

<211> 513
<212> DNA
<213> Mycobacterium tuberculosis

<400> 92
ataactcaagc ttgatttttga tcatcatgat gatcatcacc cgaattgtgg tagccgcagt 60
ggttatcgtg ggtaccgctg tgctttccat gggcgccctt ttccgggcttt ccgtattggg 120
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tcgttcatga aaccgtccat tgctgccctg ctgggacctg gttctgggtg ccgctacggg 480
tgcccccgcg cccggcagtc aaatcttccg ccg 513

<210> 93
<211> 345
<212> DNA
<213> Mycobacterium tuberculosis

<400> 93
caggcatgca agcttggcgt gccgttccaa cccgaattgg ctttcggcgc catcgggtgag 60
gacggcgtgc ggggtgctcaa cgacgacgtc gtccgcggga cacacctcga tgctgccgcc 120
atggacgcgg tcgaacgcaa gcagctgac gagctacaac gccgcgcgga acgcttccgc 180
cgccggcgtg accgcatccc gttgaccggg cggatcgcg tgatcgtcga tgacggcatc 240
gccaccggag cgacggccaa ggccgcgtgc caggtcgccc gggcgcacgg tgccgacaac 300
gtggtgctgg cgggtcccat cggcccagac gacatcgtgg cgaga 345

<210> 94
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 94
ataactcaagc ttttacggtg atcgcgcata acctggttca tgaactggaa gcagcgcagc 60
gcttcctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg cagggtgctc 120
ggcagctcgg ccgcgacagc cgcccgaccc tgaaccagc ttccatatcc cgcgacgaac 180
gacgccagtc cgctacgtaa cccctccgcg actgtccatg gacaacagcg cgttctccac 240
cgaccggggc cgggtgtggg gtgtttcggc gaccggcagc cangtggtcc aactgccga 300
ag 302

<210> 95
<211> 286
<212> DNA
<213> Mycobacterium tuberculosis

<400> 95
tagtcgctga ccggtgcagg tttcgacnat gtggtgccgg ttccggcggct acgtgccatc 60
gagacactgg cgcaggctat cgcaccggtt atcggctacg agcaaatacg ggtatgcgtt 120
cttgagcatg agtcggcgac cgtcgtcatg gtcgacaccc acgacggaaa gacgcagatc 180
gccgtctanc ntgtgtgccg cggattatca ggactgacct cctggctgac cggcatgttt 240
ggtcgcgatg cctggcgccc ggccggcgtg gtcgtggctg gctcgg 286

<210> 96
<211> 482
<212> DNA
<213> Mycobacterium tuberculosis

<400> 96
ataactcaagc tttccgccga taccgcgcat gtcgcgcaca tccagaactt ctgggggggat 60
ccgctgacag cggcgggata ccaaagtgcg gatgatcggg ccgcctacgt cgtgggtgtac 120
ctcgtcggta acaacgaaac cgaagcgat gactcgggcc acgcgggtgcg gcacatgggtg 180
gacaccacac cgccaccgca cgggggtgaag gcctatgtca ccgggtccggc agcactcaat 240
gccgaccagg ccgaggccgg agacaaaagt atcgctaagg tcaccgcgat caccagcatg 300
gtgatcgcat caatgttgct agtgatctat cgccccgtaa ttaccgcggg tctcgtcttg 360
atcatggctg gcatcgacct cggcgcaatc cgcggattcn tcgccttgct cgccgaccac 420
aacattttca gcctttcaac atttgcgaca acctgctcgt tctcatggcg attgcngcga 480
ac 482

<210> 97
<211> 395
<212> DNA
<213> Mycobacterium tuberculosis

<400> 97
caggcatgca agcttggcgt gccgttccaa cccgaattgg ctttcggcgc catcgggtgag 60
gacggcgtgc ggggtgtcaa cgacgacgtc gtccgctgga cacacctga tgctgccgcc 120
atggacgcgg tcgaacgcaa gcagctgata gagctacaac gccgcgcgga acgcttccgc 180
cgcgggcgtg accgcatccc gttgaccggg cggatcgcgg tgatcgctga tgacggcatc 240
gccaccggag cgacggccaa ggcggcgtgc caggtcgccc gggcgcacgg tgcggacaag 300
gtgggtgctg cgggtccgat cggcccagac gacatcgctg cgagattcgc cgggtacgcc 360
gatgaagtgg tgttggttgg cgaccggcg ttggt 395

<210> 98
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 98
ataactcaagc tttggcattg tgcacatttt ccaccggtgc tctattaatg ctgagccgct 60
aattgtgacc ccagtcggga aacacgcgga gcaccaaatt caccgcagcg gccggggcgg 120
ttcaactcac catggatcgc tctcgtcgtc tgggtgtgga caatcgctgc tgtagcgcgt 180
cgcgaaacacc tcagcttctg ctgcgcgggc ttcttcgggc gatggtaacc cccagggttc 240
gccacgggtc ttacgtagca gtgcgacgcg gtgttcatct gcatcgacct gttgactcat 300
cctgtcaagg atgaaggcgt actgggcccga ctgcgccttc tgccgcgcca ggtcggcaat 360
caccaggatc tcagaaacga gctgcgactc actcttccag gccaccctgg ccgaaagctc 420
gacatggtca atccggccg 439

<210> 99
<211> 348
<212> DNA
<213> Mycobacterium tuberculosis

<400> 99
caggcatgca agcttgcggg ccggagtggg ttgcacggcc gctcgtttct cggcatcggt 60
ttgggctgtc accagcagtt ggtagttctt cactactgt tgttcgagcg tcgagccgcc 120
gcgcgtgtcg aggtcgccgg acgcgtatcc cgccaggccg gtcagggtgc ccttccagtc 180

cacgccgctg	tggtcggcga	accgcttata	ttcaatcgag	acgatcgcca	gcttcacgt	240
gttggcgatc	ttgtccgagg	gcacctcgaa	ccggcgctgc	gagtacagcc	acgcgatcgt	300
gttgcccttc	gcgtcgacca	tcgtcgatac	cgcaggcact	tgcccctc		348

<210> 100
 <211> 436
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 100						
ataactcaagc	ttcccggcgg	ccagtaccga	aagcgcgaac	agctcgcggc	agcccacgac	60
gtgctgcgtc	ggattgccgg	cggcgaaatc	aattccaggc	agctcccgga	caatgcggct	120
ctgctggccc	gcaacgaagg	actcgaggtc	accccgggtg	ccggggtcgt	ggtgcacctg	180
ccgatcgcac	aggttggccc	acaaccggcc	gcttgatgcc	cggtcggcaa	gcccggcagt	240
tgccaaacct	agcgtgatca	ggctcggctc	gcgagttcgg	cgaagaagtg	gctcgcctga	300
tcacctacca	tcggccagga	tctgcgtgtc	atcacaacgc	tcgccaagga	ggttggtgtg	360
gtgctatcga	cggcctttag	ccagatgttc	ggaatcgact	atccgatagt	gtccgcgcca	420
atggacttga	tcgccg					436

<210> 101
 <211> 445
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 101						
agcttcgggtg	tagccgatca	ccggaagccg	catgatcagc	cacgtttcgc	gccgcccggc	60
atacggcggc	gtaccgatct	ccgcgtcata	caccgcggg	taatcgccga	cggtgccggg	120
tcgcgagccg	aaggtgacga	cgctgattga	atcgagttcc	aggtccagcg	ggtggcgcag	180
caacggcgcg	agctcaacga	cgtcaatcac	gttgctcgtt	tctacggtca	ccgaccgggt	240
gaccgtagtc	gcccgggtgcg	ctcggccgag	aagttgcacc	gccaccaccg	cgacaccgtc	300
ttgcacgcgg	acgccacccc	cggatcgggt	gttggccaaag	gtaattgggt	cattccattt	360
gacgggacgc	cgaccccgcg	gccccagtag	cgcccacgac	cacgccggct	gaccaccac	420
tgtacgaaca	ccaaggcgac	gccga				445

<210> 102
 <211> 261
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 102						
ataactcaagc	ttcgggtggct	tcgcccggcc	tgccgggtgg	acttcatgac	aacgcggggg	60
cgattacccc	cgctaccgcc	agcagcatga	cggcgggtacc	taacaccgcc	cggtatgcctc	120
gcacgtgcct	cgatgtgctc	acggaatcgc	cccggcaccg	cgatctcgag	gatcaccagc	180
gttacccccg	gcagcgcgac	accgacaatt	ccgtacaccg	ccacgccgat	ccggccctgg	240
gccagctgat	tgagctggc	g				261

<210> 103
 <211> 244
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 103						
caggcatgca	agcttcacac	tgtacggatc	cacgaacatc	ccgttgaact	gacaggtgcg	60

```

gcccggtctcg atcaggcccg ccacttggtc tacgcgggtta ccgaagatct cttcgggtgac 120
ctgcccgcgcg ccggccagct cggcccagtg cccggcggtg gccgcccgcg cgacgatctt 180
ggcgtccacg gtggtccggg tcttgcccgc tagcacgatc cgcgagtcgg ccggtcaccc 240
gggt
244

```

```

<210> 104
<211> 376
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 104
atactcaagc tttccaagtc ccaagtgtcg atcatggcca aagagctcga caaagccgta 60
gaggcgtttc ggaccgcgcc gctcgatgcc ggcccgtata ccttcctcgc cgccgacgcc 120
ctggtgctca aggtgcgcga ggcaggccgc gtcgtcgggg tgcacacctt gatcgccacc 180
ggcgtcaacg ccgagggcta ccgaaagatc ctgggcatcc aggtcacctc cgccgaagac 240
ggggccggct ggctggcggt cttccgcgac ctggtcgccc gcggcctgtc cggggtcgcg 300
ctggtcacca gcgacgccc cgccggcctg gtggccgcga tcggggccac cctgcccgca 360
gcggcctggc agcgct
376

```

```

<210> 105
<211> 284
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 105
caggcatgca agcttcacac gtaggcgcgc tcgataaatg actccgcgcg gcttcgcaca 60
tctcgtagc gatccttggc gagcaggta accgggcgct gcccgtcgag gagccggttt 120
ttggcgtgca gccactggcc gacacctcgg ggggtaagcg aatccgagag caggaggacg 180
aggtcacgaa gctgcgccag ccggtcgta cgtcagggc ggatgtcgcc ggtccgccac 240
cccggtaccg cccgatcgga cacctgtatg accgcggcga cgtc
284

```

```

<210> 106
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 106
cgcggcggcg cattaccccc gctaccgtca gcagcttgac ggcggtagcg aacaccgcgc 60
gatgcagcgc aggtgcgtct atgtgcacac ggaatcgccc cggcaccgcg atctcgagga 120
tcaccagtgc ccgcccctg
140

```

```

<210> 107
<211> 491
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 107
gggatcgagg aacagcgcgt tgaactgata ggtgcggccc ggctcgagca ggccggccat 60
ttgttcgatg cggttaccga agatctcttc ggtgacctgc ccgccgcgcg ccagctcggc 120
ccagtccccg gcgttgccgc ccgcggcgac gatcttggcg tccacggtgg tcggggtcat 180
gccgcgagc aggatcggcg agcggccggt cagccgggtg aacttcgtcg agagcttgac 240
cctgccgtcg gggaggcgaa ccacggtcgg tgcgtatctc gaccaggccc gggcaacctc 300
gggggtggcg ccgacgggtga acaggttgcy ctggccaccg cgggtagccg ccggcactat 360

```

```

gccgatgccc aggccgcgga tcaccgggtgc ggtcagtcgg gtcaggatgt cgccccggccc 420
caggtcgaag atccagcggg cgccgggccgc gtggacacng gtgatctcgt ccaccatcga 480
ctttctgatc a                                     491

```

```

<210> 108
<211> 364
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 108
taactcaagg cttgcgttga ggccccaggc ccatcgacgg tttggcggcc ttaaattgcac 60
tgaggtcgtc aattgacccc acagcggaaa tgccgactat tcgcaggcct ctttcgcctt 120
ggctgccgga gaggggctcc gcgggaaccg catgcaggta tatgacctcg gtttctcggg 180
tgctaccgcy tgccttgctg aggatgaact cggcgttgga attgtccagc cggcccaatt 240
catcgagcgc agattcgta acatggccgg cggcgacata cgcttcaccg tggatctgct 300
ccacacggac cgccctgctg ggatcctgct cacgggtaaa ggaacttacn tggcnctcgg 360
tgcc                                     364

```

```

<210> 109
<211> 453
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 109
ccttctgcgc caccacacc gtcaacgccc gcgaagtcca cgtcgtccag gccatcggcg 60
gcctcacgga tggattcggc gcggacgtgg tgatcgacgc cgtcggccga ccggaaacct 120
accagcaggc cttctacgcc cgcgatctcg ccggaaccgt tgtgctggtg ggtgtgccga 180
cgcccgacat gcgcctggac atgccgctgg tcgacttctt ctctcacggc ggtgcgctga 240
agtcgtcgtg gtacggcgat tgccctgccc aaagcgactt cccacgctg atcgaccttg 300
acctgcatgg ccggctgccc ctgcagcggg tcgtttccga acgcacgagg ctcgaagacg 360
tcgaggaggc gttccacaag atgcatggcg gcaaggattt gcgttcgggtg gtgatgttgt 420
gatggccgcy atcgagcgcg tcatcaccga cgg                                     453

```

```

<210> 110
<211> 329
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 110
atactcaagc ttgattttga tcatcatgat gatcatcacc cgaagtgtgg tagccgcagt 60
ggttatcgtg ggtaccgctg tgctttccat gggcgccctt ttccgggcttt ccgtattggt 120
ctggcaggac attctgggta tcgagttgta ctggatggtg ttggcgatgt cggtgatcct 180
gctcctggcg gtgggatccg actacaatct gctgctgatt tcccggttga aaaaagaaat 240
tggggcccga ttgaacaccg gaattatccg tgccatggct ggtaccgggg gagtggttac 300
cgctgccggc atggtgttcg ccgttacca                                     329

```

```

<210> 111
<211> 438
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 111
attgnctttc ggcgccatcg gtgaggacgg cgtgcgggtg ctcaacgacg acgtcgtccg 60

```


cgggacacac	ctcgatgctg	ccgccatgga	cgcggtcgaa	cgcaagcagc	tgatcgagct	120
acaacgccgc	gcggaacgct	tccgccgcgg	gcgtgaccgc	atcccgttga	ccggggcggat	180
cgcggtgata	gtcgatgacg	gcatacggac	cgagcgacg	gccaaggcgg	cgtgccaggt	240
cgcccggggc	cacggtgcgg	acaaggtggt	gctggcggtc	ccgatcggcc	cagacgacat	300
cgtggcgaga	ttcgccgggt	acgccgatga	ggtggtgtgt	ttggcgacgc	cggcgttggt	360
cttcgccgtc	gggcagggtt	accgcaactt	caccagacc	tccgacgaag	aagtgggtggc	420
gttttctgga	tcgtgctc					438

<210> 112
 <211> 438
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 112						
atactcaagc	ttttcccgtc	cgatcatcgcc	caagcgcgctg	aggccgaagc	ggctgggttac	60
gactccctgt	ttgtgatgga	ccacttctac	caactgccca	tgttggggac	gcccgaccag	120
ccgatgctgg	aggcctacac	ggcccttggt	gcgtggcca	cggcgaccga	gcggctgcaa	180
ctgggcgcgt	tggtgaccgg	caatacctac	cgcagcccga	ccctgctggc	aaagatcatc	240
accacgctcg	acgtgggttag	cgccggtcga	gcgatcctcg	gcattggagc	cggttggttt	300
gagctggaac	accgccagct	cggtctcgag	ttcggcactt	tcagtgaccg	gttcaaccgg	360
ctcgaanagg	cgctacagat	cctcgagcca	atggtcaagg	gtgagcgcca	acgttttttcg	420
gcgatttgga	cccaccga					438

<210> 113
 <211> 482
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 113						
cggccaccgg	ggccactccg	cacaatctgt	acccgacca	gatctacacc	atcgaatac	60
acggcgctcg	cgactttccg	cggtaccgc	tcaactttgt	gtcgaccctc	aacgccattg	120
ccggcaccta	ctacgtgcac	tccaactact	tcactctgac	gccggaacaa	attgacgcag	180
cggttccgct	gaccaatac	gtcgggtcca	cgatgaccga	gtactacatc	attcgcacgg	240
agaacctgcc	gctgctagag	ccactgcat	cggtgccgat	cgtggggaac	ccactggcga	300
acctggttca	accaaacttg	aaggtgattg	ttaacctggg	ctacggcgac	ccggcctatg	360
gttattcgac	ctcgccgccc	aatggtgcga	ctcgttccg	gttggttcca	gaggtcagcc	420
cggtcgtcat	cgccgacgct	ctcgtcgccg	ggaccagcag	ggaatcggcg	atttcgccta	480
ca						482

<210> 114
 <211> 388
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 114						
atactcaagc	ttgggggtggc	gctgtcggtc	ggtgtgcttg	gcggcgctcg	tatcaacacc	60
gcccacgaaa	tggggcacaa	gaaggattcg	ctggagcggg	ggctgtccaa	aatcaccctc	120
gcccagacct	gtacgggca	cttctacatc	gagcacaacc	gtggccatca	cntccgggtg	180
tccacaccgg	aggaccggc	gtcggcgcg	ttcggcgaaa	cgttggtggga	gttcctgccc	240
cgcagtgtta	tcggcggtt	gcgctcgcc	gttcatttgg	aggcccaacg	gctgcgtcgg	300
ctcggcgta	gcccctggaa	tcccatgacg	tatctgcgca	acgacgtgcn	caacncgtgg	360
ctgatgtcng	tggtgttgtg	gggtgggc				388

<210> 115
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 115
tcgccaccgc accgcggcga acgctcaaag gcacctactg gcaccaaggc cccacacgtc 60
accctgtgac ctccctgcgcc gaccccgccc gaggtcctgg ccgttaccac cgaacggggc 120
agccgggagt ctggtacgca tcgaacaaag agcaagggtg atgggcggag ttgttccgcc 180
acttcgtcga tgacggggtc gatccattcg aggtccgtcg ccgcgtcggg cgagtggcgg 240
tcacactcca ggtactcgac ctacacagac agaggactcg atcccatcta ggtgtggacg 300
aaacagatct tctgtccgac gactacacca ccaccaggc catcgccgcc gcccgcgatg 360
ccaacttcga cgccgtactg gccccggcgg cggcgctccc cggttgtcaa acactttgcc 420
gtgttcgttc acgcactgcc caacatcgag cccga 455

<210> 116
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 116
atgaaataag aagagcacat ccctcagtcg gttatcatca ctacgcgtcg ccgcacccgt 60
gtaaccgatc atagcgagcg aactggcgag gaagcaaaga atatctgttc tgtcagatag 120
ctcttacgct cagcgcaaga agaaatatcc cccgcgggaa caactccagg tagaggtaca 180
cacgcggata gccaattcag agtaataaac tgtgacactc acaccctcat caatgatgac 240
gaactacacc ccgatatccg gtcacatgac gaagggaaag agaaggatat catctgtgac 300
aaactgccct caaatttggc ttccttaa 328

<210> 117
<211> 318
<212> DNA
<213> Mycobacterium tuberculosis

<400> 117
atactcaagc ttgtcgaact ctttcttgaa taccggccgg ccatccacag atgcccggaa 60
gaacttccag gtacccatgg cggttgatc agggggcggc acagttggc ttgtcctgcc 120
tcgagtggcg tcgttgtccg gcttggacgg ggctccgacg gtaccggagg gcagcgacaa 180
aacacttatg cacttggggc acccgccgag acggtgcgac acccatcccg acggcacaag 240
ctcagcccg cgccgtcttg ttcttcgtcg gatcgacatt caccacttc tgaccgggct 300
tgggcgaagg aagcagaa 318

<210> 118
<211> 405
<212> DNA
<213> Mycobacterium tuberculosis

<400> 118
ggtatagtgc ctgaccggtg caggtttcga caatgtggtg ccggttcggc ggctacgtgc 60
catcgagaca ctggcgagc ctatgcgacc cgttatcggc tacgagcaaa tcgcggtatg 120
cgttcttgag catgagtcgg cgaccgtcgt catggctcgac acccagcag gaaagacgca 180
gatcgccgtc aagcatgtgt gccgcggatt atcaggactg acctcctggc tgaccggcat 240
gtttggctgc gatgcctggc gcccgccgg cgtggctcgtg gtcggctcgg atagcgaggt 300
cagcgaattc tcgtggcagc tcgaaaggg cctgccggtg ccggtctttg cgcaaacgat 360
ggcgcaggtt acggtcgcgc ggggtgcggc cctggcggcg gccca 405

<210> 119
<211> 89
<212> DNA
<213> Mycobacterium tuberculosis

<400> 119
gacactatat nataactcaag cttcaggtca atgtgcgcca agccctgacg ctggccgacc 60
aggccaccgc cgccggancc ctntctaga 89

<210> 120
<211> 354
<212> DNA
<213> Mycobacterium tuberculosis

<400> 120
ctgtagccac ctgttgccat ccccgtcattg cccgactctg gtcattctcg atccgctgac 60
accccgcataa ggctgctcct ctcggtgcat tacctcaccg acggcgaaacn cccccagctt 120
tacgactatc cggatgacgg cacctgggtt cgggctaact tcaccgtcag cttggacggc 180
ggcgctaccg tcgatggcgc cagcggggcg atggccgggc ccggcgaccg attcgtcttc 240
ancctgtcgc gtgaacttgc cgacgtcatc gtggtcgggtg tgggcaccgt gcgcattgag 300
ggctactccg gcgtccggat ggggtgtcgtc aagcgcccgc accggcaggc ccga 354

<210> 121
<211> 379
<212> DNA
<213> Mycobacterium tuberculosis

<400> 121
atactcaagc ttcgcacgct cggcgcgcgcc ggtaccgccc aggtcgccca acagatcgtc 60
gatgttcgcy tcgtccgcct cgcgcacgtg gtctgtcacc agtcaacgtt aacgccgccc 120
cacatgtcct gcggccgggc aaaaacgtga aaaacgagcg ggcgactgcn atgtcatgac 180
accgacggcc gccgatgggc ccagggtctg gcaaattcga tctgtgcggc cagtgccagc 240
agcgtcgctt cgtcatacgg ccggccgacg agttgaaccg acatgggcag gccgtcgccc 300
tcgaagtccc acggcaccac gggcgcgggc tggccgggtc gattccaaaa ttgaaagtac 360
ggaaccgctg caccaccaa 379

<210> 122
<211> 393
<212> DNA
<213> Mycobacterium tuberculosis

<400> 122
atcgttttcga ccaggcgctc catccggcga gtggatactc ccagcaggta gcaggctcgcc 60
accacgctgg tcagtgcgcy ttcagctcgc ttgcggcgct gcagcagcca gtccgggaaa 120
tagctgccct ggcgagctt ggggatcgcy acgtcgatgg ttgcggcacg ggtgtcgaaa 180
tcaccggtggc ggtagccggt gcgctgattg gaccgctcat cgctgcgttc gcggtagccc 240
gccccgcaca gggcgtcggc ttcagcccc atcaaggcgg cgatgaacgt cgagagcagc 300
ccgcgcagca gatccgggct cgcctgtgcy agttggtcag ccagaagctg ctcggtgtcg 360
ataagatgan aagaagtcatt tgcgttattt cct 393

<210> 123

<211> 333
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 123
 atactcaagc ttgggtgttg ccgatcaccg gaagccgcat gatcagccac gtttcgcgcc 60
 gcccggcata cggcggcgta ccgatctccg cgtcatacac ccgcgggtaa tcgccgacgg 120
 tgccggttcg cgagccgaag gtgacgacgc tgattgaatc gagttccagg tccagcgggt 180
 ggcgagcaa cggcgcgagc tcaacnacgt caatcacgtt gtcgctttct acggtcaccg 240
 acccggtgac cgtagtcgcc cgggtgcgctc ggccgagaag ttgcaccgcc accaccgcga 300
 caacgtcttg caccgggacg ccaccccccg gat 333

<210> 124
 <211> 426
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 124
 gcgcnaacag ctgcgggcag cccacgacgt gctgcgtcgg attgccggcg gcgagatcaa 60
 ttccaggcag ctcccggaaca atgcggctct gctggcccgc aacgaaggac tcgaggtcac 120
 cccggtgccc ggggtcgttg tgcacctgcc gatcgcacag gttggccac aaccggccgc 180
 ttgatccccg gtcggcaagc ccggcagttg ccaaaccag cgtgatcagg ctccggtcgc 240
 gagttcggcg aaaaagtggc tcgcctgac acctaccatc ggccaggatc tgcgtgtcat 300
 caccgacgctc gccaaaggagg ttgttgtggt gctatcgacg gccttttagcc agatgttcgg 360
 aatcgactat ccgatagtgt ccgcgccaat ggacttgatc gccggcggtg agctggctgc 420
 cgcngt 426

<210> 125
 <211> 336
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 125
 atactcaagc tttctccgat acccgccatg tcgcgcacat ccaggacttc tgggggggatc 60
 cgctgacagc ggcgggatcc caaagtgcgg atgatcgggc cgcctacgctc gtggtgtacc 120
 tcgtcggttaa caacgaaacc gaagcgtatg actcgggtcca cgcggtgcgg cacatggttg 180
 acaccacacc gccaccgcac ggggtgaagg cctatgtcac cggtcggga gcaactcaatg 240
 ccgaccaggc cgaggccgga aacaaaagta tcgctaaggt caccgcgac acgaacatgg 300
 tgatcgcagc aatgttgcta gtgatctatc gctccg 336

<210> 126
 <211> 347
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 126
 ccatgagcac cgccagccga gcacgaggcc aaactccgcc gacgcaggcc ggttggactt 60
 gtgctgctgg acaaggggtt tagccgccga agcagtgcag tacatcggcg aagagcagtt 120
 cgctgtcgca ccgacggcgc aaaccgtgag gctagggag cgaggagcac atggccgccg 180
 acccgcaatg tacacgtctc aagcaaacca tcgaaccgg atggctatac atcaccgcc 240
 atcgcgcgg tcaagccggg atcgtcgat acggcgcagt actgattcac gtgcccggtg 300
 aatgccgcac cccggggagc actttccgcc aaaactaacc cggttg 347

<210> 127
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

<400> 127
cgggtgtcat tggccaccgg cggcggtgt cgggaaatg gcgggtcccc ggtggttttg 60
ctgaggagtg ctgaaccgta gtcgaagtgg gcggcgtcag actccacca gccagcaggc 120
agcgcgaanc tgaatcctcc aaccgggttg tcnatccgga caggttgggg tgcgtttggg 180
gcaatnacag gtggcgggcg tgcgttcggg tcggccggcg gaggtgctgc nttgggatcc 240
ccggctgggc attcggcntg ttggcgggcg ccggtggtgg ggggggcaac acgtgtcncc 300
ggtgcgggtg gccct 315

<210> 128
<211> 354
<212> DNA
<213> Mycobacterium tuberculosis

<400> 128
ccaagatcta caccatcgaa tacgacggcg tcgccgactt tccgcggtac ccgctcaact 60
ttgtgtcgac cctcaacgcc attgccggca cctactacgt gcactccaac tacttcatcc 120
tgacgccgga acaanttgc gcagcggttc cgctgaccaa tacggtcggg cccacgatga 180
cccagtacta catcattcgc acggagaacc tgccgctgct agagccactg cgatcggtgc 240
cgatcggtgg ganaccact ggcgaacctg ggttcaacca aacttgaagg tgattgttaa 300
cctgggctac ggcgaccggg cctatgggta ttcgacctcg ccgcccaaat gttg 354

<210> 129
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 129
agcttccccg gttcggcttt ggatcaagac cccagtcgcg gggcgcgatc cggcngctcg 60
gtgactacat caagccacaa atcgacggct ttcgggggtg cgataccgat gacgtggcgg 120
atgtcgagtg ttgagttctc ggcgggggcg atgtcacct ggcgatcacc tgctctcgt 180
tgacgatcga tcgtctatgc cgcggtctct gcgggaacag gccnccagta catcgccaca 240
gacgggatcc acccgcatth cggctacggt tgctcgtttc ggtgttcgga ctagtcggtc 300
ctggtgacgt gccgggtgat cggaccggtc ctagcactga ccaatggcca aatgcggggc 360

<210> 130
<211> 483
<212> DNA
<213> Mycobacterium tuberculosis

<400> 130
cggggggcct cttaatagt taggaaagaa gctctacata ttcaggagga ttcaccatgg 60
ctcgtgcggg cgggatcgac ctcgggacca ccaactccgt cgtctcgggt ctggaagggtg 120
gcgaccgggt cgtcgtcgcc aactccgagg gctccaggac caccctcgta attgtcgcgt 180
tcgcccgcga cggtgaggtg ctggtctgcc agcccgcga gaaccaggca gtgaccaacg 240
tcgatcgac cgtgcgctcg gtcaagcgac acatgggcag cgactggtcc atagagattg 300
acggcaagaa atacaccgcg ccggagatca gcgccgcat tctgatgaag ctgaagcgcg 360
acgccgaggc ctacctcggt gaggacatta ccgacgcggt tatcacgacg cccgcctact 420
tcaatgacgc ccagcgtcag gccaccaagg acccggccag atcgccggtc tcacgtgctg 480
cgg 483

<210> 131
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

<400> 131
ataactcaagc ttcataacag gcctgtttgtg ggcgaccccg gctcgccgag ttctgcacgc 60
accgcctcaa gtgcgggccc caccgcgggc atctcccggg cagcagggc cgcgggcccgc 120
gccgcagcga cggcgtgttc gcgcagttcg ccgtcaatga tgctgacctg atcgccacc 180
cgggcgttct cggcgtcttc gcgttacta atcgcggtgc tcagcagcgt ctcgacagcc 240
accacccgag tggcgaccag ctgctccacc acggaccgca gcgatgccgt cacctcacc 300
gtccagcggg ccaccacgac acggtcgtgc accagcgcgc gggcattcac caccagggc 360
gtcaccgcca ggccgatcgc cacaccgcgc accatccccg atgcagccag gccgggagta 420
aga 423

<210> 132
<211> 338
<212> DNA
<213> Mycobacterium tuberculosis

<400> 132
ctgggtgctgg acggagccta gtacaacttc ctctccaatg ctcttgcccc gatcgcgggcg 60
accaggatga cccaggacat cctgccgccc gaagtactgg aaaagctcac acccgagttc 120
gtcgcaccgg tgggtggcta cctgtgcacc gaggagtgtg ccgacaaccc atcggtgtac 180
gtcgtcagtg gtggttaggt gcagcgagtt gcgctgtttg gcaacgacgg cgccaacttc 240
gacaaaccgc cgtcngtaca agatgttgcg gcgcggtggg ccgagatcnc cgatctgtcc 300
ggtgcgaaaa ttgctggatt caagttgtag aactaaat 338

<210> 133
<211> 173
<212> DNA
<213> Mycobacterium tuberculosis

<400> 133
ataactcaagc ttttcggcg tcgtccacct gacccaaaaa gcgcaggtgc gccgccaac 60
ggcccgccctg gccgcgcaac tggtcggcgt cgccgtggcc gacaatcagt agctggacat 120
ccggaaaccg ctgcaccacc ttcggcagcg cgtcaagcaa aaacggccat tcc 173

<210> 134
<211> 255
<212> DNA
<213> Mycobacterium tuberculosis

<400> 134
tttcagatct ctttttatg acatgactgg agatctgtct agattgcagc tcctgtgagc 60
gtgggtaccg gattcaagcc ggtcggtcac gccgcggtgg taccggcttt gcggcagtgc 120
tcggcctcga gttcggcgat cgcgcgcgaa gtgcgtttcg cgcaccaaga tcgcggccta 180
atggccggcg atgaccgca tgaccagcgc gatccaggaa aaaccgttcc aaccagtgtc 240
gggcggccat ccccg 255

<210> 135

<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

<400> 135
ataactcaagc ttcccgacca caagttgaac agcaccgatt tcggcgagca cttcgtcaac 60
ttccaggggtg cccgcaccaa gtatttcgac aagtatttcc gtcggggccgc cgccgccggc 120
gcgcggcagg tgggtcatcct ggcgggcggg ctggactccc gcgcgtaccg gctgccttgg 180
cccgaacgga ccacggtttt tgagctggac cgcccgcagg tccttgattt caagcgcgag 240
gtgctcgcca gccacggtgc ccaaccgcgc gccctgcgcc cgca 285

<210> 136
<211> 494
<212> DNA
<213> Mycobacterium tuberculosis

<400> 136
gtgtgctgtc aattcagagc tgagcctgat gcactcaact tactgagcat gctaacgctg 60
gtcgtgcggg tcttgttccc gcgtgtcggc agggcacacg ctcggggctg agctgggaga 120
ggccccggtc aagcccgag agcagtgtc agtccgccag cttgaccgac ttctgatgag 180
aacgcgttc tcgccgtatt gaactggcgt gctgacggtc gctgagcagc gctcgccgag 240
tgcgggccgt gattctttca tcgagccagg aggcgcattc gtgttcggcc gcctgcgggt 300
cggcccatc gtcgacgcga tccgtcacc actcctcgat caggctctgc tcatcgaacg 360
ggccaacggt gctgtcggag tatgtgtgcg tgggcacggc gagccgggtg ctgtggtaca 420
cccaccgttg catgaccaag ttgacgcctg actggctgag caccgcgatc cgctcacagg 480
tcggaacgtt ggtg 494

<210> 137
<211> 357
<212> DNA
<213> Mycobacterium tuberculosis

<400> 137
ataactcaagc ttttggtcta gccggccgag cccgatacag gtgtcatttg ccaccggcgg 60
cggctgtccg ggaaatggcg ggtccccgtt ggttttgctg aggagtgtg aaccgtatgc 120
gaagtgggcg gcgtcagact ccaccagcc agcaggcagc gcgaaactga atcctccaac 180
cgggttgctg atccggacag gttgggggtgc gtttggggca atgacagggt gcggcgggtgc 240
gtcggggtcg gccggcgga gtgctgcgtt gggatcgccc ggctgggcat tctgcgtgtt 300
ggcggcgggc ggtggtgggg gggcaacagg tgtctccggt gcgggtggcg ctgcacc 357

<210> 138
<211> 458
<212> DNA
<213> Mycobacterium tuberculosis

<400> 138
ggggccactc cgcacaatct gtacccgacc aagatctaca ccatcgaata cgacggcgtc 60
gccgactttc cgcggtaccc gctcaacttt gtgtcgaccc tcaacgccat tgccggcacc 120
tactacgtgc actccaacta cttcatcctg acgcccgaac aaattgacgc agcggttccg 180
ctgaccaata cggtcgggtcc cacgatgacc cagtactaca tcattcgac ggagaacctg 240
ccgctgctag agccactgcg atcggtgccg atcgtgggga acccactggc gaacctggtt 300
caacaaaact tgaaggatgat tgtaaacctg ggctacggcg acccggccta tggttattcg 360
acctcgccgc ccaatgttgc gactccgttc ggggtgttcc cagaggtcag cccggtcgtc 420
atcgccgacg ctctcgtcgc cgggaccag cacggaat 458

<210> 139
<211> 595
<212> DNA
<213> Mycobacterium tuberculosis

<400> 139
ttctntcttc ccnnattcgt nnntctenta ctaccngggc cncaaaacac cttggcnaac 60
gctcaaaggc gntacnggca ccaaggcccc acacgtcacc ctgtgacctc ctgcgccgac 120
cccgcccgag gtccctggccg ttaccactga acgggcgagc cgggagtctg gtacgcatcg 180
aacaaagagc aaggtgcatg ggcggagttg ttccgccnct ttttttatga cggggtcgat 240
ccattcgagg tccgtcgccg cgtcgggtcg gtggcggtca cactccaggt actcgacctc 300
ncagacgaga ggactcgatc ccatctangt gtggacnaaa cagatcttct gtccgacgac 360
tacacaccac ccaggccatc gccgcggccc gcgatgccaa cttcnacncc gtnctggccc 420
cggcgggcgc gctccccggt tgtcaaacac ctgccgtgtt cgttcacnca ctgcccaca 480
tcnagcccga ncnatccnag gtccgtccaa cgctccgcg gctcnccaac ctntcccnc 540
tgatcntccg caccaaacac atgcccgaact centgcncn attgcttga tccct 595

<210> 140
<211> 434
<212> DNA
<213> Mycobacterium tuberculosis

<400> 140
ccgctatcgg tcggtgtgct tggcgggcgc ggtatcaaca ccgcccacga aatggggcac 60
aagaaggatt cgctggagcg gtggctgtcc aagatcacc tcgcccagac ctgctacggg 120
cacttctaca tcgagcaca ccgtggccat cagctccggg tgtccacacc ggaggaccgc 180
gcgtcggcgc ggttcggcga gacgttgtgg gagttcctgc cccgcagtgt tatcggcggc 240
ttgcgctcgg ccgttcattt ggaggcccaa cggtcgcgtc ggctcggcgt cagcccctgg 300
aatcccatga cgtatctgcg caacgacgtg ctcaacgcgt ggctgatgtc ggtggtgttg 360
tggggtgggc tgatcgcggt ctccggcccg gcgctgatcc cgttcgtcat catccaggca 420
gtcttcggct tcag 434

<210> 141
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 141
atactcatgc ttgccgaagt tccgatgggt cgcgccggcg ancccagcga agtcgctagc 60
gtggccgtgt tcttggtctt ggatctatcc tcgtacatga ccggcaccgt gttggacgtg 120
actggcggcc ggttcatatg acaccgagat cattgccacg gtacggcaat tcgtcaagaa 180
ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgcg aagaaatcgt 240
cgatcggcgt ggtgttattg gcttgctcgg tcgccggctg caagggtatc gacaccaccg 300
agttcattct ccgggcgtgc c 321

<210> 142
<211> 348
<212> DNA
<213> Mycobacterium tuberculosis

<400> 142
ggcgtcaacg gtgtcggcac cggcgtcctg cagttggtag gcctgcagtt tgtgcatcag 60


```

gccgatgccg cggccctcgt ggccacgcat gtacagcacc acgccgcgcc cctcacgggc 120
gaccatcgcc agcgcggcgt ccagctgagg cccgcaatcg cagcggcgtg acccaaacac 180
atcgccgggtc aagcactccg aatgcacccg gaccagcacg tcgtcaccgt cggcggtggg 240
cccggcgatc tcgccgcgga ccagcgcgac atgttccacg tcctcgtaga tgctggtgta 300
gccgatggcg cgaatctccc atgacgagtc ggaatccgcg ctcggcg 348

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<210> 143
<211> 339
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 143
atactcaagc ttccggcctcg ctgcaggagt gggagccgca gggctggaaa tccgaaaaac 60
gagccgggtga tcgcactgtc gccgatcggg gccgcacctg gttggtgta ccgatgaatc 120
cgcacccaaa atgtggctgc ggtggcgttt cttgactcct tggcgtcgac tcttgtggca 180
gccaccgagc gggttggtcca ggatctggat gggcaaagtt gtgcggcccg gccggtgacg 240
gccgatgagc tgaccgaggt cgacagcgcc gtgttggtcg acttgggaacc gacatggatt 300
cgccccggtt ggcgtcacct caagcatttc aatggttat 339

```

```

<210> 144
<211> 269
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 144
atgcgtcacc ccgatgcgcc cagatcgggg cttcgcaa ataaagcacgaa caggcgggca 60
aaacgtctat ctcgagagcc gaagggcaat cagccgaccg tcgacgaacg acaccggcga 120
taaccactta ggcgttgaac ggccggccca aacattacgc ctccgttgat aaggctttcg 180
gtctcttccc cggtcacccc aagcaccttg cggcaaattt gaacgctttc ctgtccgggc 240
accggccccc ggctttgggg tcntccga 269

```

```

<210> 145
<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 145
atactcaagc ttcaatcgcg ccgccacaat ccaaatatgc gtctagcgtc tcgatgagcg 60
tcggtccggc atcggctagg ggccgcatca cgtcggtagt cagggccacg atcgcccaag 120
gcgtcgccca tcaagggcgc gttcgggcaa aaattcccct atccagcacg ggccgcggcg 180
ctccgnccca gccggcgacg gcgttcatcc cggagatcgc ctcgctagcg ctgcggtgcg 240
ccgcggtcag catgggcgcc gtggggccga tgaccaccgg ggcgt 285

```

```

<210> 146
<211> 75
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 146
ttcggcgggt ctgtagattg cggtcggcca cccacaggc actcatgaac cgcagccac 60
gatcgatctc ggtgg 75

```

<210> 147
<211> 164
<212> DNA
<213> Mycobacterium tuberculosis

<400> 147
gcgcaccatc gccagtaggt gcccgtaggc gggcgcgctc agccacccga gcggaaacgc 60
gagtcggaac agcaacagca ggacggggcg aaccagggcg gtgaccatgc ccccggcgct 120
gaacatcaac cacaggaagg gctccgccga gcgtccgcgc gacc 164

<210> 148
<211> 228
<212> DNA
<213> Mycobacterium tuberculosis

<400> 148
catcgtcgaa cttcggtccg ggttgntagn accgcagcac caaacgcacc caccgacccc 60
cacgcttcac gccaacccct tagttcattg gcgtgaacag cagcgtagcc ggttgccccg 120
atatatgtgg aaaaatcggt cggacgtaca aaaaaagttc ctgacgctgg cgtcaactcg 180
aaactgcctc ggaagtcaat gatgatccat cagtcaatat taaagtcg 228

<210> 149
<211> 238
<212> DNA
<213> Mycobacterium tuberculosis

<400> 149
atactcaagc ttgtctgctg cctcagcgta tgcattcaac agcgcatcgc gatcaacgat 60
caggcgcgcc gatttcgggc cgcgggcagt ggcactggcc agatggccgt ttttttcgag 120
aaacttcaac gcctgagcgc tgcttcccat cgagagaccg gtggcctcta caaccgatgc 180
gacagttgga ccggcgatgt tcgccagcag cgcttcacat acggcaagtn tggcgcg 238

<210> 150
<211> 162
<212> DNA
<213> Mycobacterium tuberculosis

<400> 150
ttgtccaggc ggggaatcgg gcagggagac gacaccttcg ttcggttcga tcgtcgcgaa 60
cgggtagttg gccgcgacca cgttgtttcg ggtcagcgcg ttgaaaagtg tcgacttgcc 120
gacgttgggc aggccacga tcccaggct caagtcaca ga 162

<210> 151
<211> 377
<212> DNA
<213> Mycobacterium tuberculosis

<400> 151
atactcatgc ttggcgctg ggtggcagcc cacctgccca ccacacggac cgcggtgcgg 60
acgcggctga cgcgcctggg ggtcagcatc gtggccggtc tgctgttgta tgccaacttc 120
ccgcgcgcga actgctgggt ggccggcggtg gttgcgctcg cattgctggc ctgggtgctg 180
accnccgcn cnacaacacc ggtgggtggg ctgggctacg gcctgctatt cggcctgggt 240
ttctacgtct cgttgttgcc gtggatcggc gagctgggtg gcccggggcc ctgggtggca 300

ctggcgacga cgtncgcgct gttccccggc atcttcggtc tgttcgccgt cgtgggtaccc 360
tgttgccggg ttggccc 377

<210> 152
<211> 308
<212> DNA
<213> Mycobacterium tuberculosis

<400> 152
cgccaattca cgatatcggt aaccgatata ccgagccgat agctggcggg ctccgggtggt 60
ggccagcggc gctgcgacga aaggtgtgac cgtcatgaaa cagacaccac cggcggccgt 120
cggccgtcgt cacctgctcg agatctcagc atccgcagcc ggtgtgatcg cgctttcggc 180
gtgtagtggg tcgccgcccg accccggcaa aggcggggcc gacacaaccc cggaacagga 240
agtcccggtc accgcgcccg aagnacttga tgcgcgaacn cggagtgtc caaacgcac 300
ctgctgat 308

<210> 153
<211> 377
<212> DNA
<213> Mycobacterium tuberculosis

<400> 153
atactcaagc ttgggcactg acttcggtag cccctccgcc tttggccagc agcagccaca 60
gcgcggttcg cggaccgaac gtggacatca atagcccggg atcgggtgtg gcaagttggt 120
aaacggtggt gatcccaagc tttgccagcc ttttcgtagt cttgggcccc acacccaca 180
gtgcttcgac ggtacggtca cccatgatgg ccatccagtt ggcacgggtg agctgataaa 240
tgccagctgg tttcgccaac ccggtagcga tcttggcgcg ctgcttggtg tcaactgatac 300
ctatcgagca agacagcccg gtttgcgaca aaatgacttt tcggatctct tcggcgactt 360
cgatggggtc gtcggga 377

<210> 154
<211> 259
<212> DNA
<213> Mycobacterium tuberculosis

<400> 154
aaagtccgtg gccggttcgc taaacacccg gcggacactc agacggtgct ggtggtgagg 60
catggcaccg cgggcagcaa agcgcacttc tccgggggac gacagcaagc gaccgctaga 120
caagaggggt cgtgcgcagg cagaaacggt ggtacacagc tgctggcggt cggcgccacc 180
gatgtttatg ccgccgaccg ggtgcgctgc caccagacga tggagccact cgccgcggaa 240
ctgaacgtga ccatacaca 259

<210> 155
<211> 372
<212> DNA
<213> Mycobacterium tuberculosis

<400> 155
atactcaagc ttgggttcca cgcccgcgca gccacgccgt cacctttcca cgagacctca 60
cctgccgata cgaaatggaa tcggccgtga cggaattggc gcaccgaaca cccaacgagg 120
tggtggcttc gtcgcgaacc gtcacccgag tcgcggccac cgtgcgcacg gcgacgttct 180
acacccgcac caagatccga aagctgcaag ctcccagcac cgatcccgcg gtcacacacc 240
ctgccgcccg gcacgtcctt gacctattcg agctggatcg gcccgctccg ttgctgggag 300

tgcggttaga actggcctag aaccggcggg cacaccgcnc ctgggcgggg cgaattcttg 360
accgcncgg cc 372

<210> 156
<211> 290
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 156
cgcggttggc gtagttggac gggtcgcctt ccgaggccaa tgatgacgat gaccacgccg 60
atcacgatgg ccaccgagag ggacaacaac agaaagctga cgaatccctc cttggcggcc 120
ggggctttgt ggtcgccggg cgcgatgggc gcgaatttac ggcccgtcc cccaggccgc 180
cgcgaagcag ggtccccagc cagttggcgt aggcggaatt aacgatcagc gccaccgcga 240
taacctgcc a tgcctcgggc atatcgatgt gcggccagaa caggccgaac 290

<210> 157
<211> 470
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 157
ccaacaagag catcgggaca tacggagtca actaccggc caacgggtgat ttcttggccg 60
ccgctgacgg cgcgaacgac gccagcgacc acattcagca gatggccagc gcgtgccggg 120
ccacgaggtt ggtgctcggc ggctactccc aggggtcggc cgtgatcgac atcgtcaccg 180
ccgcaccact gcccggcctc gggttcacgc agcgttgcc gcccgagcg gacgatcaca 240
tcgccgcgat cgccctgttc gggaatccct cgggcgcgcg tggcgggctg atgagcgccc 300
tgaccctca attcgggtcc aagaccatca ncctctgcaa caacggcgac ccgatttgtt 360
cngacggcaa ccggtggcga gcgcacctag gctacgtgcc cgggatgacc aaccaggcgg 420
cgcgtttcgt cgcgagcagg atctaaccgc gagccgcca tagattccg 470

<210> 158
<211> 434
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 158
taanaccgt gtaatttggg atgggcaaaa aggccaagca ccgcgtggcc acgaacgccg 60
ggagggacaa tctcgggcgg ctagggcttc tcgcgggaag gccgaacgt acggcgtttc 120
aacacgtcgc gtcnccctcc gaccgcgaac attcggggat ggcagcaacc tggtagcncc 180
ctggccgggc gatgatctgc agcgtcgccg cgggtagtcg ccgcccgggc ggctacagtc 240
tgaaacgcga tgaccatcga tgtgtggatg cagcatccga cgcaacggtt cctacacggc 300
gatatgttcg cctcgtcgcg ccggtggacc ggtgggtcta tcccggagac cgaentcccg 360
atcgaagcga ccgtctcctc gatggacgcc ggcggcgtca ccctgggttt gctcaccgcc 420
tggcgtggcc ccaa 434

<210> 159
<211> 363
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 159
gtccgcaaaa gactcagcgg ccgactttgc tcgcagctgg cggtagccgc ccaccgattc 60
gatgccgtgg tcgcggaaga atgocctccg aaatcgcac gccgactcca gttcggcgag 120

```

catccgcgat gccagctgcg gctgogcoct gccggccacg gcacccacat gcggcagttc 180
gtccacctgg gccagcgccc cgccgcccga gtccaaacaa tagaactgca cccggccccg 240
atcgtgggta gcagccaacg ccatgatcag cgtccgcagc gcggttgact tgcccgtttg 300
cgggtgcacct acgaccgcga cattgcctgc ggccccggac aagtcgatcg tcagcggcac 360
ccn
363

```

```

<210> 160
<211> 301
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 160
cgtggccacg aacgccggga gggacantct cgggcccgtc gggcttctcg cgggaaggcc 60
cgaacgtacg gcgtttcaac acgtcgcgtc gccctccgac cgcgaacatt cggggatggc 120
agcaacctgg cagctacctg gccgggcgat gatctgcagc gtcgcccgcg gtagtcgccg 180
cccggggcgg tacagtctga aacgcgatga ccatcgatgt gtggatgcat catccgacgc 240
aacggttcct acacggcgat atgttcncct cgctgcgcgc gtggaccggt gggcttatcc 300
c
301

```

```

<210> 161
<211> 436
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 161
atactcaagc tttgcggcgg gcgcgcgaaat gtgaacgcac caaacccgcc cgtcgcgggt 60
cggcgggcca ctcgacctcg aattttgcgc cgtgaccat ccagcccgcg ggcagttggg 120
caccggcccc cccggtcgcg gcataactgt tggcgtcgcc gtcataaagc tcgaacagca 180
ccgaaaccga ctccaccacc ggccgggtgc cctcaaaatc cagccgacg tccacatacc 240
gggaaaacgt cgggtgtcca tcgggtttcg gcttgcccgc cagctgcaca ccaccggtgg 300
cctcggccac cttcgcggcc tgagcgcagc tacncatcct gacgatcgc accccgcccc 360
cgggtcacgc ttggcctccg tgaccgcacg catcgcccgg ttgcgcgcac cgcgacgccc 420
gtacagccgc gcgcac
436

```

```

<210> 162
<211> 390
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 162
agcttgccgg gactgcggaa cagaagcggc ggttcctacc gcgggtgtgc gccggcgcca 60
tatcggcctt tttactaacc gaaccgatg tgggctccga tccggcgcg atggcatcga 120
cggcgacgcc gatcgatgac ggccaggctt acgagcttga ggggtgtgaag ttgtggacca 180
ccaacggtgt ggtagcggac ctgctagtgg ttatggcgcg ggtaccgcgc agtgaagggc 240
accgaggggg aatcagcgcc tttgtcgtcg aggctgattc gcccgggatc accgtggagc 300
ggcgcaacaa gttcatggga ctgcgtggca tcnaaaacgg cgtgaccggc cttcatcgcg 360
tcngggtgcc caaagacaac ttgatcggca
390

```

```

<210> 163
<211> 75
<212> DNA
<213> Mycobacterium tuberculosis

```

<400> 163
ctcaagcttg gcgatgcggg ctggccaaaa ctggccgggc gggggttggc ttgttcaatc 60
aagggtgggt tgccg 75

<210> 164
<211> 110
<212> DNA
<213> Mycobacterium tuberculosis

<400> 164
ccgaaggccc gttcccgggc gttcagcaag cgatcgtcgg ttggcccact gcgggtcgaa 60
tcttgcggcc gcgccgggtcg tggaacgccc aggtcaccgc gcggcggtacc 110

<210> 165
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 165
atactcaagc ttttttctgc tcatgaaggt tagatgcctg ctgcttaagt aattcctctt 60
tatctgtaaa ggctttttga agtgcacac ctgaccgggc aaatagttca ccggggtgag 120
aaaaaagagc aacaactgat ttaggcaatt tggcgggtgtt gatacagcgg gtaataatct 180
tacgtgaaat attttccgca tcagccagcg cagaaatatt tccagcaaat tcattctgca 240
atcggcttgc ataacgctga ccacgttcat aagcacttgt tgggcgataa tcgttaccca 300
atctggataa tgcagccatc tgctcatcat ccagctcgcc aaccagaaca cgataatcac 360
tttcggtaag tgcagcagct ttacgacggc gactcccatc ggcaatttct atgacaccag 420
atactcttcg accgaacgcc ggtgtctgtt gacca 455

<210> 166
<211> 309
<212> DNA
<213> Mycobacterium tuberculosis

<400> 166
ctcaagcttg gtgcgacat ggccgggctg gagcccgct atggcaaggt tccgctcaat 60
gtggttgtga tgcagcagga ctacgttcgc ctcaatcagc tcaaacgtca ccccggtggc 120
gtgctgcgca gcatgaaggt cggcgccgc acgatgtggg cgaaggcaac aggtaaaaac 180
ctggtcggca tgggtcgagc cctcattggg ccgttgcgga tcgggttgca ccgcgcgga 240
gtgccggtcg aactcaacac cgccttcacc gatcttttcg tcaaaaatgg cgtcgtgtcc 300
ggggtatac 309

<210> 167
<211> 232
<212> DNA
<213> Mycobacterium tuberculosis

<400> 167
ccgaagcgtg ggaaatcctg accgaatacc gcgacgtgct ggacactttg gccggcgagc 60
tgctggaaaa ggagaccctg caccgaccgc agctggaaag catcttcgct gacgtctaaa 120
agcggccgcg gctcaccatg ttgcagcact tcggtggccg gatcccgtcg gacaaaccgc 180
ccatcaagac acccggggga gatcgcgatc gaaacgcggc gaaacttggg cc 232

<210> 168
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 168
cgactcgaca agcattcttg acagttgttt tggctcggca tggttagcca aggttctgcg 60
gtcccaccag atcatcttgg tccggtagcg ctgcgtccgg tatgctgccg ccgggattct 120
cgctgctatt actcccccg aaaaacgcc aacgggtccagc gcgtgggccc ccgcgggtccc 180
catcacaac tgaaccccc aacaggggaca tgcttagcgg tagggcgcg gccaaaggcgg 240
cagcaatcgc atcactgcgc tgcgcgtcac tattaacca cccggacttc acttccacga 300
ccccgaatgg cgcgcgggtca ttgatcatct tgcgcaccgc ggataatccg ggattgccag 360
cccattcgac taccgcatgc gaggcatcgg ctgaccgcag cgggtccgatt acccgagcgc 420
cccgantaca tctcctccaa tatcaatggg cgcaa 455

<210> 169
<211> 428
<212> DNA
<213> Mycobacterium tuberculosis

<400> 169
gcggtntagc ttcccgctcg accggcgacc gccagccgag aagctcgttt tcccagtggt 60
gctggggatt ctacagctgc tgctgagtc gtgccagacc gcttccgctt cgggttataa 120
cgagccgcgg ggctacgatc gtgcgacgct gaagttgggt ttctccatgg acttggggat 180
gtgcctgaac cgggttcacct acgactccaa gctggcgccg tctcgtccgc aggtcgttgc 240
ttgcgatagc cgggaggccc ggatccgcaa tgacggattc catgccaacg ctccgagttg 300
catgcgatc gactacgaat tgatcaccca gaaccatcgg gcgtattact gcctgaagta 360
cctggtgcgg gtcggatact gctatccggc ggtgacgacc cccggcaagc cgccatccgt 420
gctgctgt 428

<210> 170
<211> 385
<212> DNA
<213> Mycobacterium tuberculosis

<400> 170
ctcaagcttg ggcgtgacgg ccaccggggc cactccgcac aatctgtacc cgaccaagat 60
ctacaccatc gaatacgacg gcgtcgccga ctttcgcgg taccgctca actttgtgtc 120
gacctcaac gccattgccg gcacctacta cgtgcactcc aactacttca tcctgacgcc 180
ggaacaaatt gacgcagcgg ttccgctgac caatacggtc ggtcccacga tgaccagta 240
ctacatcatt cgcacggaga acctgccgct gctaaagcca ctgcgatcgg tgccgatcgt 300
ggggaaccca ctggcgaaac tggttcaacc aaacttgaag gtgattgtta acctgggcta 360
cggcgaccgg gcctatgggt attcc 385

<210> 171
<211> 318
<212> DNA
<213> Mycobacterium tuberculosis

<400> 171
cgggtgtcat tggccaccgg cggcggtgt cgggaaatg gcgggtcccc ggtgggtttg 60
ctgaggagtg ctgaaccgta gtggaagtgg ggcgcgtcag actccacca gccagcaggc 120
agcgcgaagc tgaatcctcc aacggggttg tgcgtccgga cagggtgggg tgcgtttggg 180
gcaatgacag gtggcgggcg tgcgttcggg tcggccggcg gaggtgctgc gttgggatcg 240

```

cccggctggg cattcggcgt gttggcggcg gccgggtggtg ggggggcaac angtgtcgcc 300
ggtgcgggtg gcgctgca                                     318

```

```

<210> 172
<211> 443
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 172
ncttgatatt ggcgtcaacg gtgtcggcac cggcgtcctg cagttggtag gcctgcagtt 60
tgtgcatcag gccgatgccg cggccctcgt ggccacgcat gtacagcacc acgccgcgcc 120
cctcacgggc gaccatcgcc agcgcggcgt ccagctgagg cccgcaatcg cagcggcgtg 180
acccaaacac atcgccggtc aagcaactcc aatgcacccg gaccagcacg tcgtcaccgt 240
cggcgttggg cccggcgatc tcgccgcgga ccagcgcgac atgttccacg tcctcgtaga 300
tgctggtgta gccgatggcg cgaaactccc catgacgagt cggaatccgc gcctcggcga 360
cccgtcaat gtgcttctcg tgcttgccgc gccattcgat caagtcagca atggtgatca 420
gcgccagacc gtgctcntcg gcg                                     443

```

```

<210> 173
<211> 420
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 173
cataagggcc ggcgtaccgc gtaccggccg cgggcctacc acgtgccgga actggaagcg 60
cagtaagccc tcaacgcgcc accgcttttg cccgcgcgcc cggcgtaggc gcatcggcgg 120
tggccgtggg gcggcgcaact gcgacctcac cagcggcttt cgagctttgt tcgatcaacc 180
ggccagcatg gtcgaggatg cattcgagac catattcgaa attggtttca tcgggggccc 240
cgatccgatg cccctcccca gttgcgtgag caagcagcgg agtcgtcgcg ggatcgatgg 300
ccacgggggtg ttcaatggcg gatggtccgc tgcccgcgga ctggctcttg cgggagagcc 360
gatctagcac caccgatccg cgcacgtgga ccgaaaccgc cgagtagatg tcgaaagcgt 420

```

```

<210> 174
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 174
cgtccttttc cccaagatag aaaggcagga gagtgtcttc tgcataaata tgaagatctg 60
gtacccatcc gtgatacatt gaggtgtgtc cctgggggtc gttaccttcc acnagcaaaa 120
cacgtagccc cttcagagcc nnatcctgag caanatgaac agaaactgag gttttgtaaa 180
cgccaccttt atgggcagca acccgatca cgggtggaaa tacgtcttca gcacgtcgca 240
atcgcgatcc aaacacatca cgcataatgat taatttggtc aattgtataa ccaacacggt 300
gtcaaccgcg tcctcgaatt tccatatccg ggtgcg                                     336

```

```

<210> 175
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 175
ctcaagcttc atgtccgtac ggctcgggta cgcttccgtc gcagtgtgcg agtgataaat 60
gacgaccggg acctcgtcgg catcttccat agcccgccac accttcagtt gctcaccgga 120

```



```

atccaaccgg tagaagggtcg gcgagcgctc ggcattggtc atcgggatat gccgctcggg 180
acggtcagag ccctcgggtc cggccagcac tccgcaggct tcgtcggggg ggtcgcgcaca 240
cgcatggggc accatcgcat tcac                                     264

```

```

<210> 176
<211> 325
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 176
ncgccgccag ccaccacgcg cgggtcgggc gccggggccc gcccgccagg ctgctccgct 60
cggatgatggc acgccaccgc gacaccaccc ggctgcgcta cgtcgcagcca taccggggcg 120
agctacatcg gctcggccgc ccagtgttcg ggccctcttt cgaggtcgag gtcgataccg 180
atttgcgcat ccgcagccgc accctggacg acagaaccgt gccctacgan tgcttgtcgg 240
gcggggccaa agaacagctt ggcatcctgg cgcgattggc cggcgcgggc ctggtctcca 300
aagaagacgc ccttccggtg ctgat                                     325

```

```

<210> 177
<211> 243
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 177
cgccacgttc atgggcaaca accccgatca ccggtggaaa tacgtcttca gcacgtcgca 60
atcgcgtacc aaacacatca cgcataatgat taattcgtcc aattgtataa ccaacacgtt 120
gctcaacccg tcctcgaatt tccatatccg ggtgcggtag tcgccctgct ttctcggcat 180
ctctgatagc ctgagaagaa accccaacta aatccgctgc ttncctatt ctccagcgcc 240
ggg                                     243

```

```

<210> 178
<211> 430
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 178
atactcaagc ttcaaccgat tgacgcattg tgcgaaactga cggcgcccgcc gcatggccaa 60
tccggaagac catcattggc cagtggccgg gcgctaacag gttccagccc cccaccagtg 120
ccgctcgaac atgcggtgca acccattcgc aggcgggcag ggaaagcacc gcggaagccg 180
caaagggctg cagttccgcg cccaatagtg tcgtccgcaa ccagatgcgc tcgaaaaccg 240
cgccggcagt cagcgcaccc gacgcgaggt cgagagacgt cgtcagcgcg cccacatggg 300
gtgccaatcg gcacggcagg taggcgcgc gcaaccgaa cgcgtggtgc atgccacagg 360
tccgcaggag gcgcagcacc cgccaatgcc gaagcccacg aaacatcggg cgcattccacg 420
cttcaacctc                                     430

```

```

<210> 179
<211> 448
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 179
agcttttggc aggggtctcct tcgaattcgg cgtgcaccgc tatggggttgc agcagcggct 60
ggcgccgcac accccaactgg ccggggtgtt ttgcggccga acccgatca tggtagcgca 120
aaaggagatt cgctgttcg atgctgggat tcgccaccgc gaggccatcg accgattact 180

```

cgccaccggg	gtgcgagagg	tgccgcagtc	ccgctccgtc	gacgtctccg	acgatccatc	240
cggtctccgc	cgtcgggttg	cggtagccgt	cgatgaaatc	gctgccggcc	gctaccacaa	300
ggtgattctg	tcccgtttgt	togaagtgcc	tttcgcgata	gactttccgt	tgacctaccg	360
gctggggcgt	cggcacaaca	ccccggtgag	gtcgtttttg	ttgcagttgg	gcggaatccg	420
tgctctgggt	tacagcccga	atcgtcac				448

<210> 180
 <211> 380
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 180						
atactcaagc	tttgtcacac	caactgtttc	caccaggcgc	tccatccggc	gagtggatac	60
tcccagcagg	tagcaggctg	ccaccacgct	ggtcagtgcg	cgttcagctc	gcttgccggc	120
ctgcagcagc	cagtcgggga	aatagctgcc	ctggcgagcg	ttggggatcg	cgacttctat	180
ggttgccgca	cgggtgtcga	aatcacgggt	gcggtagccg	ttgcgctgat	tggaaccgtc	240
atcgctgcgt	tcgcggtagc	ccgccccgca	cagggcgctg	gcttcagccc	ccatcaaggc	300
ggcgatgaac	gtcgagagca	gcccgcgcag	cagatccggg	ctcgccctgt	cgagttggtc	360
agccagaacc	tgctcgggtg					380

<210> 181
 <211> 532
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 181						
ccttaagccc	cgcaggggccc	ggcacgcgcg	gtaccgccc	ggtcgcccaa	cagatcgctg	60
atgttcgcgt	cgtcgcgcctc	gogcacgtgg	tctgtcacca	gtcaacgtta	acgccgcgcg	120
acatgtcctg	cggccggggca	aaaacgtgaa	aaacgagcgg	gcgactgcaa	tgtcatgaca	180
ccgacggccg	ccgatggggc	cagggctctg	cagattcgat	ctgtgcggcc	agtgccagca	240
gcgtcgccctc	gtcatacggc	cggccgacga	gttgaaccga	catgggcagg	ccgtcgccgt	300
cgaagtccca	ggcaccacag	gocgcgggct	ggccggtcag	attccagact	tgaaagtacg	360
gaaccgcgtg	caccaccagc	agcaacgtcg	aaactgcacc	ccggcggttg	taggcgccga	420
tgccggacgg	gccggtcgcg	gocgctggcg	tcacaactac	gtcgacatcg	tcgaagatcg	480
actggatcgg	ctgctcacac	cactcggcgg	ccgcaggccg	ccatccgcgc	tc	532

<210> 182
 <211> 477
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 182						
agctttttga	gcgtcgcgcg	gggcagcttc	gccggcaatt	ctactagcga	gaagtctggc	60
ccgatacggg	tctgaccgaa	gtcgtcgcg	tgcagcccac	cctcattggc	gatggcgccg	120
acgatggcgc	ctggaccgat	cttgtgcgc	ttgccgacgg	cgacgcgggt	ggtggtcaag	180
tccggtctac	gcttgggcct	ttgcggacgg	tcccagcgt	ggtcgcggtt	gcgccgcgaa	240
agcggcgggg	cgggtgccat	caggaatgcc	tcaccgcgc	ggcactgcac	ggccagtgcc	300
gcggcgatgt	cagcatcgg	gacatcatgc	tcgcgttcac	actcctcgac	cagtcggcgg	360
aacagctcga	ttcccggaac	gcccagcgca	ttggtgatgg	aatcggcgaa	cttgccacc	420
cgctgggtgt	tgacatcctc	gacggtgggc	aattgcccc	ggtaacgttt	gccgcct	477

<210> 183
 <211> 461

<212> DNA

<213> Mycobacterium tuberculosis

<400> 183

```
cggtccgacc ctgttcgacg gctacctgaa tcaacccgat gccaccgccg cggcggttcga 60
cgccgacagc tggtagcgca ccggcgacgt cgcggtggtc gacggcagtg ggatgcaccg 120
catcgtggga cgcgagtcgg tcgacttgat caagtcgggt ggataccggg tcggcgcccg 180
tgaaattgaa acggtgctgc tcgggcatcc ggacgtggcg gaggcggcag tcgtcggggg 240
gcccgcagat gatctaggcc agcggatcgt tgcctacgta gtcggctcag cgaatgtcga 300
tgccgacggg cttatcaact ttgttgccca acaactttcg gtgcacaagc gcccgcgcga 360
ggtgcgtatc gtanatgcgc tgccgcgcaa cgccttgggg aaagtgtcc agaacattgc 420
tgtcagaagc tganctacgc gaattatcgt gttacgctgg a 461
```

<210> 184

<211> 440

<212> DNA

<213> Mycobacterium tuberculosis

<400> 184

```
atactcaagc ttgccgaagt tccgatgggt cgcgccggcg agcccagcga agtcgctacc 60
gtggccgtgt tcttggttcc ggatctatcc tcgttcatga ccggcaccgt gttggacgtg 120
actggcggcc ggtccatatg acaccgagat cattgccacg gtacggcaat tcgtcaagaa 180
ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgc aagaaatcgt 240
cgatcggtcg ggtgttattg gcttgctcgg tcgccggctg caagggatc gacaccaccg 300
agttcattct cgggcgtgcc ggcgcatcgc agctggcggt gcgcgctgcc cagcaccgtc 360
ataggtactt gacgatggtc cacgtcggac gagcgccctc acgtcgctgc cgaacgggat 420
gcatggcggc tacgattctc 440
```

<210> 185

<211> 515

<212> DNA

<213> Mycobacterium tuberculosis

<400> 185

```
cggtgtcggc accggcgctc tgcagttggt aggcctgcag tttgtgcatc aggccgatgc 60
cgcggccctc gtggccacgc atgtacagca ccacgccgcg cccctcacgg gcgaccatcg 120
ccagcgcggc gtccagctga ggcccgaat cgcagcggcg tgacccaaac acatcgccgg 180
tcaagcactc cgaatgcacc cggaccagca cgtcgtcacc gtcggcggtg ggcccggcga 240
tctcgccgcg gaccagcgcg acatgttcca cgtcctcgta gatgctggtg tagccgatgg 300
cgcgaaactc cccatgacga gtcggaatcc ggcctcggc gaccgcgtca atgtgcttct 360
cgtgcttgcg ccgccattcg atcaagtcag caatggtgat cagcgccaga ccgtgctcat 420
cggcgaacac cgcaattcat cgggtgttgcg ccatcgagcc ctcatctttt tggctgacga 480
tctcgcaaat cgcccccgcg ggttgacgac ggcat 515
```

<210> 186

<211> 345

<212> DNA

<213> Mycobacterium tuberculosis

<400> 186

```
atactcaagc tttgggtgaa agccgatcac cggaagccgc atgatcagcc acgtttcgcg 60
ccgcccggca tacggcgggc taccgatctc cgcgtcatac acccgcggtt aatcgccgac 120
ggtgccgggt cgcgagccga aggtgacgac gctgattgaa tcgagttcca ggtccagcgg 180
gtggcgcagc aacggcgcgga gctcaacgac gtcaatcacg ttgtcgcttt ctacggtcac 240
```

cgaccgggtg	accgtntctg	cccggtgcgc	tcggccgata	agttgcaccg	ccaccaccgc	300
gacaccgtct	tgacgcgga	cccacccccg	gatccgttgt	tggcc		345

<210> 187
 <211> 366
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 187						
agcttgctgg	catccgctcc	agtagcgccc	cgcgcgtggc	ttccagcgcc	cgcagatgct	60
ccatgagccg	gccggtcgag	tcggcgccgg	cgttcaccgc	caccgcgag	gagctggcgg	120
ccagcatctc	cgccttcacg	cattgcgcga	tcacagagag	aatatacgtc	tcataattcgt	180
tggaaggctg	cgcaggcaat	cggtcgatga	cggatttgat	ggcatcgagc	tgtgcttcgg	240
cgtagccctc	cagcacgtcg	gtatcgctgt	ggcgggtccac	gacgaccgca	ccggcgcggc	300
ggacagccgt	cgggttgga	gntgtgcggc	gatcagtcg	gccagctccg	cctcgggatc	360
agcggc						366

<210> 188
 <211> 423
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 188						
atactcaagc	ttgctgcagc	ttcctatgac	tgctcccgaa	acctgggggt	gtgcctgctg	60
tgtatgcacg	gcatacggac	atccttcccc	tgagaccgc	ggtcgaacca	gccacgtgtc	120
catcatcagg	ggtcaacccc	ggccaagggc	gacggcacgc	caagttcgcc	gaccgttaac	180
ctagtgtgt	tagcttcatt	tgctgcgagc	aaaacagctg	gtcggccgtt	aggaactgaa	240
ttgaaactca	accgatttgg	tgccgcgcta	ggtgtcctgg	ctgcgggtgc	gctggtgttg	300
tccgcgtgtg	gtaacnacna	caatgtgacc	gggggaggtg	caaccactgg	ccaggcgctc	360
gcgaaggtcg	attgcggggg	gaagaagaac	tcaaagccag	tgggtcgacg	cgcaggccaa	420
cgc						423

<210> 189
 <211> 453
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 189						
agcttgacgc	ggagacggac	acattgcgaa	cattgatgac	aaaatagaaa	tcattgatgg	60
tttgagtcac	caggccgac	aagccttcgc	cgagccaaat	tccaatcaag	aggcccaagc	120
ccgtaccaat	cagcccggca	acgagggatt	ccgtcattat	cagccaaaat	aactgctctc	180
gggttacacc	caaacagcgc	aatatggcga	aaaacggctg	ccgttgacg	acattaaatg	240
tcacggtatt	gtagattaaa	aagataccca	ccaacaaggc	aatcaaactg	agagcggtta	300
aattgaccgt	aaaagcgctc	gtcatctgtt	tgacggtgtc	ccgttgggta	tccgacgttt	360
ccatacgcac	accggccggc	agtctttgtt	ggatgcgtgt	tgacgtggcc	tcattctttga	420
tgatcaaate	gatgtggctc	agtcttcggg	gca			453

<210> 190
 <211> 402
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 190

atactcaagc	ttcgggtcag	gcggcgctgc	tggtaaagtc	gctgaccggt	gcaggttttcg	60
acaatgtggt	gccgggttcgg	cggctacgtg	ccatcgagac	actggcgag	gctatcgac	120
ccgttatcgg	ctacgagcaa	atcgcggtat	gcgttcttga	gcatgagtcg	gcgaccgtcg	180
tcatggtcga	caccacgac	ggaaagacgc	agatcgccgt	caagcatgtg	tgccgcggat	240
tatcaggact	gacctcctgg	ctgaccggca	tgtttggtcg	cgatgcctgg	cgcccgccg	300
gcgtggtcgt	ggtccgctcg	gatagcgagg	tcagcgaatt	cncntggcag	ctccaaaggg	360
tcctgccggt	gccgggtcttt	gcgcaaacna	aggcncaggt	ta		402

<210> 191

<211> 427

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 191

tgatcgcgca	tcacctgctt	cataaaactgg	aagcagcgca	gcgcttcctt	ttcggccgca	60
acatgagcca	gcctctcgtc	ggcggtcggg	tgcaggtgct	cgggcagctc	ggccgcgaca	120
gccgcctgac	cctgaaacca	gcttccatat	cccgcgacga	acgacgccag	tccgctacgt	180
aaccctccg	cgactgtcca	tggaacaacag	cgcgttctcc	accgaccggg	cccgggtgtg	240
gggtgtttcg	gcgaccggca	gccaggtggt	ccacactgcc	gacggggcgc	gcgagccgtt	300
caccgaccag	gccgcccagc	aagtccgccc	gatcgcatac	tccaaccggt	tgcggtactg	360
caggttcagc	tggcgtactc	ctcgtcgcgc	tcggcgaggt	cttgctccag	cacgtcgcan	420
acggcag						427

<210> 192

<211> 347

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 192

caaagcgcgca	actgctcgcg	gcagcccacg	acgtgctgcg	tcggattgcc	ggcggcgaaa	60
tcaattccag	gcagctcccg	gacaatgcgg	ctctgctggc	ccgcaacgaa	ggactcgagg	120
tcaccccggt	gcccggggtc	gtggtgcacc	tgccgatcgc	acaggttggc	ccacaaccgg	180
ccgcttgatg	cccggtcggc	aagcccggca	gttgccaaac	ccagcgtgat	caggctcggc	240
tcgcgagttc	cggaagaag	tggtccgccc	tgatcaccta	ccatccgcca	ggatctgcgt	300
gtcttcacca	cgcccgccaa	ggaggttggt	gtggtgctat	cgaccgn		347

<210> 193

<211> 330

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 193

ccggaagccg	catgatcagc	caagttttgc	gccgcccggc	atacggcggc	gtaccgatct	60
ccgcgtcata	caccgcggg	taatcgccga	cggtgccggt	tcgcgagccg	aaggtgacga	120
cgctgattga	atcgagttcc	aggtccagcg	ggtggcgag	caacggcgcg	agctcaacga	180
cgtcaatcac	gttgtcgctt	tctacggtca	ccgaccgggt	gaccgtngtc	gcccgggtgcg	240
ctcggccgaa	aanttgacc	gccaccaccg	cgaaaccgtc	ttgcacnccg	gaagccaccc	300
ccgatccggt	gttgggcccag	gttattgggt				330

<210> 194

<211> 215

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 194
 ccggaaccgc cgacggcacg gtataacgcc tccgcatatg ggtcgacaac cagcgggtcg 60
 gactttctggg cttctagcgt tcgcgcngtc gcgacaaaca gcgcggtcga accgacactc 120
 gttgtgatgt cctagctatc acgttcggta cgcacccaat cgagtctagc gcgggtagnt 180
 cagccccgat ctccangctc cgccgagcca ggcgc 215

<210> 195
 <211> 225
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 195
 ctggtttatg tcccgttgaa gttccatcac ccgatgtggc gggagcactg ccaggctcgat 60
 ctcaactacc acatccggcc gtggcggttg cgcgccccgg ggggtcggcg cgaactcgac 120
 gaggcggtcg gagaaatcg cagcaccocg ctgaaccgcg accaccgct gtgggagatg 180
 tacttcgttg aggggcttgc caaccaccgg atcgcggtgg ttgcc 225

<210> 196
 <211> 161
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 196
 ccgagcagtt gggaatcgct ctgcancaaa ccaatattct gcgcgacgtc gcgcgacgag 60
 ctggaccgat taggcgtacg cctccgnctg gacgacaccg gggcactcga tgacccccgac 120
 gcctacgctc gcaggatatt gttcgccgga cccctctcta g 161

<210> 197
 <211> 240
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 197
 tatataatac tcaagcttgc cgacgccaac gctcgcgcga tgttggttagc ccgaccgggc 60
 tcttacatgg caccggtgcc ccacacgtca gcctgtgacg tctgcaccg cgactcttta 120
 catagaatgt ggattgccgg attggggatg tccggcatcg ctcaatctgt agtcgcggtt 180
 gtcccgcgag ggccatgtgg atggggggaa ggatccgtgg cgtccgggat caccatgggg 240

<210> 198
 <211> 348
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 198
 atactcaagc ttgccgaagt tccgatgggt cgcgcggcg agcccaacga aatcgctagc 60
 gtggccgtgt tcttggtctc ggatctatcc tcgtacatga ccggcaccgt gttggacgtg 120
 actggcggcc ggttcatatg acaccgagat cattgccacg gtacggaaat tcgtccagaa 180
 ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgc aagaaatcgt 240
 caatcggctg ggtgttattg gcttgctcgg tcgcgggctg cgaggggttc tacaccaccg 300
 agttcattct cgggcgtgcc ggcgcatctg aactggcggt gcgcgctg 348

<210> 199
<211> 371
<212> DNA
<213> Mycobacterium tuberculosis

<400> 199
gcaccggcgt cctgcagttg gtaggcctgc agtttgtgca tcaggccgat gccgcggccc 60
tcgtggccac gcatgtacag caccacgccg cgcccctcac gggcgaccat cgccagcgcg 120
gcgtccagct gaggcccgca atcgacagcg cgtgacccaa acacatcgcc ggtcaagcac 180
tccgaatgca cccggaccag cactgtttca ccgtcggcgt tgggcccggc gatctcgccg 240
cggaccaacg cgacatgttc cactgcctcg tagatgctgg ttagccgat ggcgcgaaac 300
tccccangac aagtcggaat ccgcgcctcg gcgaaccgct caatgtgcct ctctgtcttg 360
cgccgccatt c 371

<210> 200
<211> 165
<212> DNA
<213> Mycobacterium tuberculosis

<400> 200
tggtccgtgt gcgcatacca atacaacgcg ccggggcacct gacgcggcgg ccgcaaccaa 60
tcggtggcca tcgccatctt ctgctaccgg gtcaacggac gcaccttctc ctggccgacg 120
tagtgcgccc accgcgcgcc gttgcgtccc atcgatccgg tcaac 165

<210> 201
<211> 390
<212> DNA
<213> Mycobacterium tuberculosis

<400> 201
ggcgtgttgg ccaccggggc cactccgcac aatctgtacc cgaccaagat ctacaccatc 60
gaatacgacg gcgtcgccga ctttcgcggg taccgctca actttgtgtc gacctcaac 120
gccattgccg gcacctacta cgtgcactcc aactacttca tcctgacgcc ggaacaaatt 180
gacgcagcgg ttccgctgac caatacggtc ggtcccacga tgaccagta ctacatcatt 240
cgcacggaga acctgccgt gctaaagcca ctggcgatcg gtgccgatcg tggggaaccc 300
actggcgaac ctggttcaac caaacttgaa ggtgattgtt tacctgggct acggcgaccc 360
ggcctatggt tattcgacct ccccgcccaa 390

<210> 202
<211> 427
<212> DNA
<213> Mycobacterium tuberculosis

<400> 202
cgtccgtgnc ccctcaancg cgtgnngccg aagcggctgg ttacgactcc ctgtttgtga 60
tggacacttc taccaactgc ccatgttggg gacgcccagc cagccgatgc tggaggccta 120
cacggccctt ggtgcgttgg ccacggcgac cgancggctg caactgggcg cgttggtgac 180
cggcaatacc taccgcagcc cgacctgct ggcaaagatc atcaccacgc tcgacgtggt 240
tagcgccggt cgagcgatcc tcggcattgg agccggttgg tttgagctgg aaacaccgcc 300
agctcggctt cgagttcggc actttcagtg accggttcaa ccggctcgaa gaggcgctac 360
agatcctcca gccaatggtc aagggtgagc gcccaacggt tttcgcgat tggtaacca 420
ccgaatc 427

<210> 203
<211> 498
<212> DNA
<213> Mycobacterium tuberculosis

<400> 203
ccgcttccgt gtaaccgagc anngcgagcg anctggcgag gaagcaaaga agaactgttc 60
tgtcagatag ctcttacgct cagcgcaaga agaaatatcc accgtgggaa aaactccagg 120
tagaggataga cacgcggata gccaatcag agtaataaac tgtgataatc aaccctcatc 180
aatgatgacg aactatcccc cgatatcagg tcacatgacg aagggaaaga gaaggaaatc 240
aactgtgaca aactgccctc aaatttggct tccttaaaaa ttacagttca aaaagtatga 300
gaaaatccat gcaggctgaa ggaaacagca aaactgtgac aaattaccct cagtaggtca 360
gaacaaatgt gacgaaccnc cctcaaactc gtgacagata accctcagac tatcctgtcg 420
tcatggaagt gatatcgcgg aaggaaaata cgatntgagt cgtctggcgg cctttctttt 480
tctcaatgta tgagagcg 498

<210> 204
<211> 265
<212> DNA
<213> Mycobacterium tuberculosis

<400> 204
tgacacccaa cagagggcac ttaagatggc aatgcggccg cctacctgca cgttttcgcg 60
atgtcagagg atgccgaggg agaacaatgc gagcacggcc gctgacnttg ctcaccgctt 120
tggcgcgcggt gacattggtg gtggttgcg gctgcnaggc ccgantcnag gccgaagcat 180
atagcgcggc cgaccgcatt tcgtctcgac cgcaagcgcg acctcagccg cagccggtgg 240
agctactgct gcgcgccatc acgcc 265

<210> 205
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 205
acgggcgacg ctgaggtggg cccgcggcta ttcattgctgt cgtccacgtc cagcgacgca 60
ctgcgccaga cggcccccca actagccacc tgggtggaag aacaccagga ctgctgtggc 120
gcctcggatc tggcctacac gctggcgcggt ggccgcgcgc accggccggt gcgcaccgcg 180
gtggttgccg ccaacctgcc ggagctcgtc gaggggtttgc gcgaggtggc cgacggtgac 240
ccctctatga cgcggcggtg ggacactgtg atctaagacc ggtctgggtc ttctccgggc 300
aagggctca gtgggcggcg atgggcaccc aattgctcgc cagcgaacca gtgttcgcg 360
ccaccatcg 369

<210> 206
<211> 428
<212> DNA
<213> Mycobacterium tuberculosis

<400> 206
atactcaagc ttcgcgagat ccggatggca ctcacgctgg acaagacctt cacaaaatct 60
gaaatcctga cccgatactt gaacctggtc tcgttcggca ataactcgtt cggcgtgcag 120
gacgcggcgc aaacgtactt cggcatcaac gcgtccgacc tgaattggca gcaagcggcg 180
ctgctggccg gcatggtgca atcgaccagc acgctcaacc cgtacaccaa ccccgacggc 240
gcgctggccc ggcggaacgt ggtcctcgac accatgatcn aaaacttccc ggggagggcg 300
aggcgttgcg tgccgcccag ggcgaaccgc tgggggttct gccgcagccc aatgattgcc 360

gcgcggctgc atcgcgggcg gcgaccgcca ttcttctgcg aatacgtcca ggagtactgt 420
ctcggggc 428

<210> 207
<211> 378
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 207
agcttatgtg gccgcccacc taccttatct agcctagcta actaaatcca gtgccgacag 60
tgcgcggtcg gccacccagc atgaggttat gaccacggca tatgccagcg cgctggcggc 120
gatgccgacg ctgaccgagt tggccgctaa tcacaccagc catgcggtgt tgctgggaac 180
gaatttcttt ggaatcaata cgatcccgat cgcgctcaat gaggccgact atgcgcggat 240
gtggattcag gcggccacca cgatgagtat ctatgagggc acctccgatg cggcgctggc 300
gtcngcaccg caaaccacac cggctccggt actgttcaac ggcggtgctg gcgtttgcca 360
gcgcctgccg gcgatctc 378

<210> 208
<211> 284
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 208
atactcaagc ttgccaccca tgccgagcaa ggtcgactca gcgatgacga attgttcttc 60
ttcgcggtgt tgctgctggt tgcgggctat gagagcactg ctcatatgat tagcacnttg 120
tttctgacgc tgcccgacta tccagatcag ctgacactcc ttgcgcagca accagacctg 180
atcccgtcgg cgatcgagga gcacctccgc tttatatcgc aatccaaaac atctgccgca 240
caacgcgcgt cgactattcg gtcggtcaag cggatcatccc ggga 284

<210> 209
<211> 236
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 209
ccggggtaga acgatgcgat ctggggccatg tcgacatcgg tggtagaggt aaaccgcgcc 60
gtgtgcgcgg tctcgagat cagaacgtgg tcgcagttga caccgcgggc tttcagccag 120
tcgcgataat cggcgaagtc ggcgcctgcc gcccacta gcgcgacctc gccacctagc 180
acaccgatgg cgaaggccat gtttccggcc acgcgcgcgc ggtgcatcat caactc 236

<210> 210
<211> 278
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 210
atactcaagc ttggcggcaa cgccaactacc gggctcacca ggtcctgtgc cgccaccgcc 60
ggcgccgaaa gcaccatcag gtcgtagttg tctggacggt cgacaccgta agcgaacaca 120
atgccgcgcg ccatgctgtg cccgagcaag atgcgcttgc acccgggata ttcccggtg 180
gcgatcccaa cgagggtgtc gaagtcagcg gtgtatctga gatgtctctc actatcatcc 240
gtttggcacc cgagcgggca tgcccgcggg ggggtcaac 278

<210> 211
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 211
gtcgacggca tcaaggtccg cagtgatggt gttcatctca cccaggaagg cgtgaagtgg 60
ctgataccgt ggcttgagga ttcggtgcgg gtcgccagtt aatccgccgt gtgctccgga 120
tgagcgcgac ggtaaccctg gaattgtgct gtgtgctggc tgtgtcgttg tgatgagcct 180
gtctaagtgg tgcgtaaccg tttgacgagc cgcggcctcg ctgcaaacaat tgaagcccg 240
acgtctgggt ttgtattttac acaacgaggg cgctccccga tctggcgcgc gcaacgaggt 300
gcncaactatc cattcgaggt gaactggact ccttgatgct catgccgggt cggttttgtc 360

<210> 212
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 212
atactcaagc ttgcgttcga tgaagtagtc gtcggtcagc gccgcctctt cgagctcctt 60
ggcgatgcc agcaaggagt catcgccgcc gagcttgccc aggatcttgt cggcctgttc 120
cttgacgatg cgggcccgcg gatcgtagtt cttgtagaca cgatgaccga aacccatcaa 180
tttgaccccc gcctcgcggg tcttgacctt gcgttacaaa ctgctgacg tcgtcgccgc 240
tgtcgcgaat gccctc 256

<210> 213
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 213
ngtcaagccg agcatgcgcg aggnaacgac gaacccaaca agccatggtg gttggcgccg 60
tcgagaggtc ggcggtcgcc acaacgggaa gatcgccctt agcgtcgctc gaccgccgcc 120
tcgagttggg tcataacgaa gtagctgatg ccgatcatgt cgacgtttcc gtcgcatcag 180
cgtgcagcgg cgacccactc gacgaggtct cgggtgccgc gcggccaggg caccagcagt 240
gacgattcca ggcgccgtcg gg 262

<210> 214
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 214
cgataatcgc ttccggtaag tgcagcagct ttacgacggc gactcccatc ggcaatttct 60
atgacaccag atactcttcg accgaacgcc ggtgtctgtt gaccagtcag tagaaaagaa 120
gggatgagat ctccccgtgc gtccctcagta agcagctcct ggtcgcgttc attacctgac 180
cataccgag aggtcttctc aacactatca ccccgagca cttctagagt aaacttccca 240
tcccgaaccac atataggcta aggtaattggg cattaccgcg agccattact cctacgcgcg 300
caattaacga atccaccatc ggggcccgtg gtgtcn 336

<210> 215
<211> 259
<212> DNA

<213> Mycobacterium tuberculosis

<400> 215

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naataactcaa gcttttctcgt gattaccacc cgtgtaattt gggatgggca aaaaggcgaa 60
tcaccgcgtg gccacaaacg ccgggagggg caatctcggg cggctagggc ttctcgcggg 120
aaggcccga aagtacggcgt ttcaacacgt cgcgtcgccc tccgaccgag aacattcggg 180
gatggcagca acctggtatc accctggccg ggcaatgata tgcagcgtcg ccgcgggtag 240
tgnccgcccc ggcggttac                                     259
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<210> 216

<211> 325

<212> DNA

<213> Mycobacterium tuberculosis

<400> 216

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ccaactagag catcgggaca tacggagtca actaccgggc caacgggtgat ttcttgggcg 60
ccgctgacgg cgcgaaacgac gccagcgacc acattcagca gatggccagc gcgtgcccgg 120
ccacgatgtt ggtgctcggc ggctactccc aggggtgcggc cgtgatcgac atcgtcaccg 180
ccgcaccact gcccgggtctc gggttcacgc agccgttgcc gccgcgagcg gacgatcaca 240
tcgccgcgat cgccctgttc gggaatccct cggggcccgcg ctggcgggct gatgatcgcc 300
ctgacccctc aattcgggtc caaga                                     325
```

<210> 217

<211> 300

<212> DNA

<213> Mycobacterium tuberculosis

<400> 217

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atactcaagc ttgctgcagc ttctgtgac tgctcccgaa acctgggggt gtgcctgctg 60
tgtatgcacg gcatacggac atccttcccc tgagaccgcg ggtcgaacca gccacgtgtc 120
catcatcagg ggtcaacccc ggccaagggc gacggcacgc caagttcgcc gaccgttaac 180
ctagtgtgtg tagcttcatt tgctgcgagc aaaacagctg gtcggccggt aggaactgaa 240
ttgaaactca accgatttgg tgccgcccgt aagtgtcctg gctgccggtg cgctggtgtt 300
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<210> 218

<211> 265

<212> DNA

<213> Mycobacterium tuberculosis

<400> 218

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agcttgccgc gcgtggcgat cgcggttcaa ggccgcgtct tcgagcacia cgagcgaaga 60
cagctcggcg acggagcctt tatcgacatc cgttcggggt ggctgaccgg cggcgaagaa 120
ctgctggacg cgttggtgtc gacggtgccg tggcgagccg agcgccgtca gatgtacgac 180
cgggtggtcg atgtgccgcg gctggtgagt tttcacgacc tgaccatcga agatccgcgg 240
catccgcagc tggcgcggat gcgcc                                     265
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<210> 219

<211> 362

<212> DNA

<213> Mycobacterium tuberculosis

<400> 219

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aataactcaag cttgcgcacg accaggacgt cgagtggcgc ttgcagtgac ttggcgacct 60
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caaaggccac	cggtagccccg	ccgcgcggca	agccaaggac	naacnacggcc	ttgccggata	120
gctgcccag	gcgttgcgcc	aactggcgtc	cagcgctcgcc	acgatcgta	aagagcttca	180
tctgccgagt	gtgtcgccat	ctcatggctc	caaatatgga	attaggtccc	tgggccgact	240
gacgacagtc	cctcagcgac	cggattgcgc	atcccgccctt	gtacgctgct	ccgcaaatacc	300
cgggcttgcg	tccgcggaag	cgaactcggc	ggcgctacgg	tggtggctca	cttcggccgt	360
gc						362

<210> 220

<211> 486

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 220

ggttggtg	gtccaccttc	gcggcgggcg	cgcgatatgc	cttgctggtc	ttgctcattt	60
gatatccaat	ctatgggtcg	tggttactca	gcgggcccga	gctggccctc	ccacgggtag	120
ggccctattc	gacggtgatg	cccatcgacc	gagcggtagc	ggcgatgac	ttggccgcag	180
cgtcgacgtc	gttggcggtt	aggctcgctc	tcttggtctc	ggcgatttcg	cggacttgat	240
cccaggtgac	tttggcgacc	ttggtcttgt	gcggctccgc	cgaacccttc	gccacaccag	300
cggccttaag	cagcagcttg	gcggcgggcg	gcgtcttcag	cgtgaaagtg	aagctacggg	360
cttcataaac	ggtgatctcc	accgggatga	cgttgccgcg	ctggttctcc	gtcgcggcgt	420
tgtacgcctt	gcagaactcc	atgatgttga	cccgtgctga	ccgaacgcgg	ggcccaactg	480
cggggc						486

<210> 221

<211> 373

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 221

atactcaagc	ttttcgaccc	gcaagccggc	ggtgcccctc	ctcgttccgc	tgcccgggtc	60
gctcgatcgg	ttcgggggtc	ccgcgctagg	cccaattgcc	cggctcctcc	tcggggccgtt	120
ccacaaccgc	catcgctcgc	gggctagggt	caagccatgc	cggtaaacc	caggacgcca	180
gtgctgatcg	gctatggaca	ggtcaaccac	cgaggcgaca	tcgacgccna	aaatcagtc	240
atcgaaccgc	tcgacctgat	ggccnccgcg	gcccggaaag	ccgccgagtc	caccgtgctc	300
gaagcgggtg	attccatccg	tgtggtgcac	atgctgtcgg	cgcattaccg	gaattcccgg	360
gcgtctcctc	ggc					373

<210> 222

<211> 331

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 222

ncctggttca	tgaactggaa	gcagcgcagc	gcttctcttt	cggccgcaac	atgagccagc	60
ctctcgtcgg	cggtcgggtg	caggtgctcg	ggcagctcgg	ccgcgacagc	cgctgaccc	120
tgaaccagc	ttccatatcc	cgcgacgaac	gacgccagtc	cgctacgtaa	cccctccgcg	180
actgtccatg	gacaacagcg	cgttctccac	cgaccggggc	cgggtgttgg	ggtgttcggc	240
aacggcaacc	aagttaggtc	acactgccga	cgggcgcgcg	aaatccgttc	accgaaccag	300
gccgcnaaa	caattccgcc	cgatcccata	t			331

<210> 223

<211> 377

<212> DNA

<213> Mycobacterium tuberculosis

<400> 223

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aagctttttg acgacaccca cggacgcccc atatattgtt ggggtgggcaa gaacggtccc 120
tacctggaac gtttggtggc cggcgacacc ggtgagccca cgccgcagcg ggccaacctc 180
agcgactcga ttaccccgga cgaactgact ctacaggtgg ccgaagagct ctttgccaca 240
ccgcaacagg gacggacttt gggcttggac ccagaaaccg gccacgaaat ctttgccagg 300
ggaaggccgg tttgggcctt atgttaccta tctctgccg gaacctgcgg ctgatgcggc 360
cgcgccgct cagggan 377
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<210> 224

<211> 436

<212> DNA

<213> Mycobacterium tuberculosis

<400> 224

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agcagctagc cgcgctcgcc gcgctggtcg gtgcgtgcat gctcgcagcc ggatgcacca 60
acgtggtcga cgggaccgcc gtggtgcgg acaaaccgg accactgcat caggatccga 120
taccggtttc agcgttgaa gggctgcttc tcgacttgag ccagatcaat gccgcgctgg 180
gtgcgacatc gatgaagggt tggttcaacg ccaaggcaat gtgggactgg agcaagagcg 240
tggccgacaa gaattgcctg ggctatcgac ggtccagcac aggaaaagg ctatgccggc 300
accgggtgga ccgctatgcg cggccaacgg ctggatgaca gcctcgatga ctccaagaaa 360
cgcgaccact acgccattca agcggtcgtc ggcttcccga ccgcacatga tgccgaagaa 420
ttctacagct cctccg 436
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<210> 225

<211> 539

<212> DNA

<213> Mycobacterium tuberculosis

<400> 225

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cgcgactggc tccccggncc gctgctcggg tccgccgata gagaccggga tgtcgcccga 60
cgacgggcag cggggttgcg tgggacgggg cgggggtcgg gcagcccaag caacgggcta 120
gtccccgaat cctacggagc cgtcacctac gcctacgtaa tagtagctat caataacagt 180
tgacatacgc aacgatctgt gagatcaata ttgcctgacg catgtcaaga caggcgtcaa 240
gacaggtgtc aataattcgc tccgctggtg acggttaaccg gtcgtgcggg tgtgtgacgc 300
ctaagggaagg agtgtgggtg gtgacgctga gagtgggttc tgaggggttg gcggccgcca 360
gtgcggcggt ggaggcggtg accgcacggc tggccgcccgc acacgctggc gcggcgccgg 420
cgattacggc ggtggtggcg cccgcggcgg atccggtgtc gttgcagaat gcggtggggg 480
ttagcgcctt aagtagccag catgccgcga tcgccggcga aagggtccaa gaactgggt 539
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<210> 226

<211> 517

<212> DNA

<213> Mycobacterium tuberculosis

<400> 226

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atactcaagc ttattgaacc gcgggtcgca ggcaaagtgg acctcataac gactcgggtc 60
cagcgaccgc gccaacacga acggccggac gacgtgggcc agggtcgcgg cctcccctac 120
aaacaggatc cgttgcctgc gaacgacagg ctccggtgcg gcgttgggcg ccgtgctcgt 180
cccagcgtcc ggtcccgggt cgccggcgac gcttggttcc tccatactcg ccccctaata 240
tcgaggcagc ccgtacccgc aggcaacct ccaaaaatgc aatcccgcaa aatgcaatgc 300
gtcnagctat ttctcacacc gaccgctagt tgcggatcag aaatccgttg ggcgcggaag 360
```

tccagccgaa	tttgtttctcc	cgctccgcat	catgcttgta	atcgtttgga	aattcattcct	420
catatgcctc	gatcgcttca	taggggtccag	gccccaaaccc	gggcaggact	gggtggccgt	480
tgatgttgga	atcctccact	actaggtatt	caccggc			517

<210> 227
 <211> 488
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 227						
gtctcgatca	tggccaaaga	gctcgacgaa	gccgtagagg	cgtttcggac	ccgcccgcctc	60
gatgccggcc	cgtatacctt	cctcgccgcc	gacgccctgg	tgctcaaggt	gcgcgaggca	120
ggccgcgtcg	tcgggggtgca	caccttgatc	gccaccggcg	tcaacgccga	gggctaccga	180
gagatcctgg	gcatccaggt	cacctccgcc	gaggacgggg	ccggctggct	ggcgttcttc	240
cgcgacctgg	tcgcccgcgg	cctgtccggg	gtcgcgctgg	tcaccggcga	cgcccacgcc	300
ggcctggtgg	ccgcgatcgg	cgccaccctg	cccgcagcgg	cctggcagcg	ctgcagaacc	360
cactacgcag	ccaatctgat	ggcagccacc	ccgaagccct	cctggccgtg	ggcgccgacc	420
ctgctgcact	ccatctacga	ccagcccgcg	gccgaatcag	ttgttgccaa	tatgatcggg	480
ttctcgac						488

<210> 228
 <211> 264
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 228						
atactcaagc	tttcgtcagt	tcattggcgcc	agcagaccaa	caagagcatc	gggacatacg	60
gagtcaacta	cccggccaac	ggtgatttct	tggccgcccgc	tgacggcgcg	aacgacgccca	120
gcgaccacat	tcagcaaattg	gccagcgcgt	gccggggccac	gaggttggtg	ctcggcgggct	180
actcccaggg	tgcgggccgtg	atcaagatct	tcaccgcccgc	accactgccc	ggcctcgggt	240
tcacgcatcc	gtttggccgc	cgcc				264

<210> 229
 <211> 229
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 229						
gccccgtgta	atttgggatg	ggcaaaaagc	gaagcaccgc	gtggccacga	acgccggggag	60
ggacaatctc	gggcggttag	ggcttctcgc	gggaaggccc	gaacgtacgg	cgtttcaaca	120
cgtcgcgtcg	ccctccgacc	gcgaacattc	ggggatggca	gcaacctggt	agcaccctgg	180
ccgggcgatg	atctgcagcg	tcgcccgggg	tagtctccgc	ccgggccgc		229

<210> 230
 <211> 266
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 230						
atactcaagc	ttcctttgac	cgaacgcgtc	caccgcaccg	tgagattggt	ggcgccattc	60
gtcgtggtgt	agctgctgtt	ggcggcgtcg	ccgtattgtg	cgggccagcc	ttgtgcgggg	120
gccgcttcta	cccacaagtc	ggcacttccg	caaccgcccga	gctcgaccgc	gaattacggc	180
ggccgcaacg	gccgcccggaa	ggcgtcacgc	aatcgcttat	cctttccagg	ttcccaaata	240

ctccgcttac ttgggtcctt catcgg

266

<210> 231

<211> 258

<212> DNA

<213> Mycobacterium tuberculosis

<400> 231

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ggcagcggcg acaaccggaa cgtcgcgacg gtgctcaatc acgggtgcac ggtgtgcac 60
agaatggcgg gggttcggtt tcgcgggtgag gcgttcggcg aggaggtagt gtctaccct 120
tgcccgcggg ttctgtcgga ctgaaagga tttcattggg aaccacggc tgcgtatcg 180
agggcctcgg tgacgtctgc ttctcnagc tcaggaagtt cggcgagaat ctcggtgat 240
gttatttggc ccgcctac                                     258
```

<210> 232

<211> 224

<212> DNA

<213> Mycobacterium tuberculosis

<400> 232

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atactcaagc tttctcggct tctctgatag cctgagaaga aacccaagt taatccgctg 60
cttcacctat tctccagcgc cgggttattt tcctcgcttc cgggctgtca tcattaaact 120
gtgcaatggc gatagccttc gtcatttcat gaccagcgtt tatgactgg ttaagtgtt 180
ccatgagttt cattctgaac atcctttatt cattgttttg cggt                                     224
```

<210> 233

<211> 333

<212> DNA

<213> Mycobacterium tuberculosis

<400> 233

```
atactcaagc ttggtgaccg gcaccgcgat acgttgcggc aggcactctg gctggcggtg 60
gttcgcccgt ccgaagccgt cgaacaccat cgccagcgcg gcttccacat caacgaccat 120
ttcggccagc ttgcggcgca tcagcggctt gtcgatgagc gccccaccga atgcccgcg 180
ctgcccggcg tatcacatcg attcgaccat cgcgcggcgc gcgttgccga gggcgaaacga 240
ggcgggtgcc aaccgcaatc tgtttggtca gctccctcat gcgggttgat tccttgccgt 300
ccggacgggc ccgcgtcatg cgctcggttc gcc                                     333
```

<210> 234

<211> 407

<212> DNA

<213> Mycobacterium tuberculosis

<400> 234

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ccgttgcgca gcgtgagccg atagttgaca tccggctcgg tgaagtgaa atcgatggcc 60
aggctcaggt cccatgcgcg tgggccattg atgctgatcg ccaggacgtc aaagatttgg 120
tccggcgtca gctgggcgaa aaacgtgggc gccgggactt gcccgagct gcccggttc 180
ccgtcgcgca gctcggcggc ccgggtcaga aagaaattgc gccaggtcgc acactccgcg 240
ccgtaggcca gctgctccag ggtgtcggca tagagccgc gggccgcagc gtgctcgctg 300
tcggcgaaac ccgcattggt gagaagcgtt gccgcccaac gggaaatcac ctgcgtcgaa 360
agcttcgcgg gccagctcca gcaactcggc gatgccaccc aacgcgt                                     407
```

<210> 235
<211> 389
<212> DNA
<213> Mycobacterium tuberculosis

<400> 235
ataactcaagc ttgcggatgt tacccttgac agcgtgaact atgtcnaaac acacggcacc 60
ggaacggtgt tgggggaccc catcgagttc gagtcgctgg cggccactta tggcctgggt 120
aaaggccagg gcgagagccc gtgcgcattg gggtcggtca aaaccaacat cggccacctg 180
gaggcggccg ccggtgtggc tggattcatc aaggcgggtgc tggcgggtgca acgtgggcac 240
attccccgca acttgcaactt cacccggtgg aacccggcc tcaacacgtc ggcgacgcgg 300
ctgttcgtgc cgaccgaaag cgccccgtgg ccggcgggtg ccggtccacg cagggtgctgc 360
gtgtcatcgt tcggcctcag cgggaccaa 389

<210> 236
<211> 432
<212> DNA
<213> Mycobacterium tuberculosis

<400> 236
ccggtaacca gatcagctcg tcgacctcac tgccgggggt gaattcccca ccggtgctgc 60
gcgctgcccc gtagtgacac ttcttgacgc ctcgaaaagg ggagtcggtc gggtaggtca 120
ccgtcaggag ccgcctaccc aggttgggcg ggtgaccggt ctctcagagt atctcccgca 180
ccgccccac cgggtgcggtc tcgcccggat ccactttgcc cttgggcagc gaccagtcgt 240
cgtaacgggg gcggtgaatg acagcgatct cgaccggccc ttccgaatcg gactgcccgg 300
gtcgccagaa caccgcaccg gcggcgatca caatccggcc cgccgagcgc cggcggggcg 360
acgantttct gatcgacacc tcaactcctg cagggtcaatt cggccaagct gctcgcggtc 420
gtggatgtgg tc 432

<210> 237
<211> 287
<212> DNA
<213> Mycobacterium tuberculosis

<400> 237
ataactcaagc ttgatgccgc cgaaaccgag cgtgagcacg ccgccaccca ccacgcgcgg 60
gtcggggcgc gggccccggc cgccaggctg ctccgctcgg tgatggcacg ccaccgcgac 120
accaccgggc tgcgctacgt cgagccatac cgggcggagc tacatcggtc cggccgcccc 180
gtgttcgggc cctctttcga ggtcgaggtc tataccgatt tgcgcatccg cagccgcacc 240
ctggctcgtct cgtaccgtgc cctacctctg cttgtcgggc ggggcca 287

<210> 238
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 238
tccgtacggc ccgggtacgc ttcggtcgca gtgtgcgagt gatagatgac gaccgggacc 60
tcgtcggcat cttccatagc ccgccacacc ttcagttgct caccggaatc caaccggtag 120
aaggctcggc agcgtctggc attggtcatc gggatatgcc gctcgggacg gtcagagccc 180
tcgggtccgg ccagcaactc gcaggcttcg tcggggtggc cgcgacgcgc atgggccacc 240
atccatccac cagggtctgc cgaatcacc gc 272

<210> 239
<211> 410
<212> DNA
<213> Mycobacterium tuberculosis

<400> 239
ggacacattg cgaacattga tgacaaaata gaaatcattg atggtttgag tcaccaggcc 60
gatcaagcct tcgccgagcc aaattccaat caagaggccc aagcccgtac caatcagccc 120
ggcaacgagg gattccgtca ttatcagcca aaataactgc tctcgggtta caccctaaaca 180
gcgcaatatg gcgaaaaacg gtccgcgttg caccgacatta aatgtcacgg tattgtaaat 240
taaaaagata cccaccaaca aggcaatcaa actgagagcg gttaaattga ccgtaaaagc 300
gtccgtcatc tgtttgacgg tgtcccgttg ggtntccgac gtttccatac gcacaccggc 360
cggcagtcct tgttggtatgc gtgttgacgt ggcctcatct ttgatgatca 410

<210> 240
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 240
gcctggccca ggtgaaggcc gacctcgacg ccaaagccgc tgatccggca catgagtcgg 60
tggaactggga cttgaagtcg ctgcgatggg cgtggaaccg agccaaagat gacgtggcgc 120
cgtggtgggc cgagaattcc aaggagtgtc actcgtcggg gttggccgat ctggcccagg 180
gcctggctaa ttggaaagct ggcaagaacg ggaccgcgaaggccggcg gtgggcttcc 240
cgcgattcaa atccggggcg cgtgatcctg gcaggggtgc gttcaccacc ggcaccatgc 300
gcatagagga tgaccggcgc acgatcacgg tcccgggtgat cgggcccgtg cgggccaagg 360
agaacaccgc ccgggtgcaa cgccacctcg tgagcggggc cgcgagatc ctgaacatga 420
cctgtgcga gcggtgggg 439

<210> 241
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 241
taactcaagc ttcaagtcgc cngtcgcacc ctgttcgacg gctacctgaa tcaaccgat 60
gccccgcgcg ggcgttcgac ccgacagctg gtaccgcacc ggcgacgtcg cgggtggtcga 120
cggcagtggtg atgcaccgca tcgtgggacg cgagtcggtc gacttgatca agtcgggtgg 180
ataccgggtc ggcgcgggtg aaattgaaac ggtgctgctc gggcatccgg acgtggcgga 240
ngcggcagtc gtcgggggtgc tcgactatta tctaggccag cggatcggtg cctacgtagt 300
cggctcagcg aatgtcgatg cggacgggct tatcaacttt gttgccaac aacttt 356

<210> 242
<211> 341
<212> DNA
<213> Mycobacterium tuberculosis

<400> 242
ccatgtcgcc caacatatcg tcgatgttcg cgtcgtccgc ctccgcgcacg tgggtctgtca 60
ccagtcaacg ttaacgcgcg cgcacatgtc ctgcggccgg gcaaaaacgt gaaaaacgag 120
cgggcgactg caatgtcatg acaccgacgc cgccgatggg cccagggtct ggcagattcg 180
atctgtgcgg ccagtgccag cagcgtcgcc tcgtcatacg gccggccgac gagttgaacc 240
gacatgggca tgccgtcgcc gtcgaagtcc caccggcacca cggccgcggg ctggccggtc 300
agattccana cttgaaagta ctgaagccgc tgcaccacca g 341

<210> 243
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 243
cgaaagcgtg aaacagctcg cggcagcccc cgacgtgctg cgtcggatag ccggcgggcg 60
aagatcaatt ccaggcagct cccggacaat gcggctctgc tggcccgcaa cgaaggactc 120
gaggtcaccg cgggtgcccgg ggtcgtggtg cacctgccga tcgcacaggt tggcccacaa 180
ccggccgctt gatgcccggg cggcaagccc ggcagttgcc aaaccagcg tgatcntgct 240
cngctctnta nttcggcgaa gaagtggctc gcctgatcac ctaccatcgg ccaggatctg 300
cgtgtcatca caacgctcgc caaggagggt gttgtg 336

<210> 244
<211> 337
<212> DNA
<213> Mycobacterium tuberculosis

<400> 244
tccgccacgc ttcgcgcgcg cgggcatacg gcgcgtaccg atctccgcgt catacaccgc 60
gggtaatcgc cgacggtgcc ggttcgcgag ccgaagggtga cgacgctgat tgaatcgagt 120
tccaggtcca gcgggtggcg cagcaacggc gcgagctcaa cgacgtcaat cacgttgtcg 180
ctttctacgg tcaccgaccc ggtgaccgta gtcgcccggg gcgctcggcc gagaagctgc 240
accgccacca ccgcgacacc gtcttgacag cggaccacc ccggatcggg tgttggccaa 300
ggtaattggg tcattccatt tgacgggacg ccgaccc 337

<210> 245
<211> 337
<212> DNA
<213> Mycobacterium tuberculosis

<400> 245
cattctttaa cagttgtttt gggctcggca tggttagcca acgttctgcg gtccaccata 60
tcatcttggg ccggtagcgc tcgtccgggg tatgctgccg ccgggattct cgtgctatt 120
actcccccg aagaaccgcc accggtccag cgcgtgggcc gncgcggtcc catcaciaaac 180
tgaaccccc aacaggacat gcttatcggt agggcgcgcg ccaaggcggc agcaatcgca 240
tactgcgct ctgcgcgtca ctattaacct acccgactt cacttccacc accccgaatg 300
gcgcccgggc attgatcatc tggcgcaccg cggataa 337

<210> 246
<211> 343
<212> DNA
<213> Mycobacterium tuberculosis

<400> 246
cgggtgtcctg cagttggtag gcctgcagtt tgtgcatcat gccgatgccg cggcctcgtg 60
gccacgcagt tacagcacca gcgcgcgcc ctacacggcg aacatcgcca gcgcggcgctc 120
cagctgaagc ccgcaatcgc agcggcggtga ccaaacacat cgccgggtcaa gcactccgaa 180
tgaccggac cagcacgtcg tcacogtcgg cgttggggccc ggcgatctcg ccgcggacca 240
tgccgcacat gttccacgtc ctcgtnatg ctggtgtagc cgatggcgcg aaactcccca 300
tgacgagtcg gaatccgcgc ctcggcgacc cgctcaatgt gct 343

<210> 247
<211> 340
<212> DNA
<213> Mycobacterium tuberculosis

<400> 247
cggcatctgg cggctgaacc tgttcttggg caacatgccg aggatcgctt cttccaccac 60
gcggtcgggg tggcgttgca ttacctcacc gatggtgcgc ttgtgcaggc cgccgggata 120
ccccgagtgc cggtaaacca tcttgtgctg cagtttgcgc ccgctgatgg cgaccttgtc 180
ggcgttgatc acgatnacna atcaccgccca ncgacattgg gggcgaacgt cggctcgtgc 240
ttgccgcgca gcaggctggc cgccgcgacg caaggcgcca accaccacgt ccgtggcgtc 300
gatgacgtac caccatcgcg tgggtgtcacc cgccttgggc 340

<210> 248
<211> 322
<212> DNA
<213> Mycobacterium tuberculosis

<400> 248
gcggcaaaaa ttgaagcact cntggccact nccgccggga gggacaatct cgggaggcta 60
gggcttctcg cggaaggcc cgaacgtact gcgtttcaac acgtcgcgc gccctccgac 120
cgcgaaacatt ctgggatggc agcaacctgt tagcaccctg gccgggcat gatctgcagc 180
gtcgccgcgg gtagtcgccc ccggggcggt acagtctgaa acgcgatgac catcgatgtg 240
tggacggcgc atccgacnca acggttccta cactgtgata tgttcgcctc gctgcgccgg 300
tggacggtgg gtctatcccga 322

<210> 249
<211> 278
<212> DNA
<213> Mycobacterium tuberculosis

<400> 249
cgcgttgaac tgaaggggtg ccgcccggct cgagcaggca agccatttgt tcgatgcggt 60
taccgaagat ctcttcggtg actgcccgc gccggccagc tcggctcagt gtccggcggt 120
ggtcgccgcg gcgacaatct tggcgccac ggtggtcggg gtcattgccg cgagcaggat 180
tggcgagcgg ncggtcagcc ggggtgaactt cgtcaagagc tgacgctgcg gttggggagg 240
cgaatcatgg tcggtgcgta gcctcgacta ggcccggg 278

<210> 250
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 250
tgacaacgcg gcggcgatta ccccgctacc gcagcagcat gacgcggtag cgaacaccgc 60
cggatgcagc gcagggtgcgt cgatgtgctc acggaatcgc cccggcaccg cgatctcgag 120
gatcaccagt gccacccctt gcagcgcgac accgacgatt ccgtacaccg ccacgccgat 180
caggccctgg gccagctgat tggagctggc gtatatggcg gcgatggtga cgatggtcat 240
cgccctcttac attgtggcgg ccagaaccac ggcgttgggg cggcggtcga tgaacactag 300
gcgaccanat ccccggggtc aacaggttga ccatcc 336

<210> 251

<211> 95
<212> DNA
<213> Mycobacterium tuberculosis

<400> 251
cgcgacatc ccgaacgagg acacgcgacc gcttcgggtgt gtgatctatc agggctcgca 60
ccacgcgcaa ccgcttcggt ctacctagac gcggt 95

<210> 252
<211> 94
<212> DNA
<213> Mycobacterium tuberculosis

<400> 252
gcatgcgggt gatgccgttc tcagtgcgca acagcggttcg acgcggcata ccagccgca 60
catgccgtgc acgcggngc cggggcgga atct 94

<210> 253
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 253
ctcaagcttc agncntcta agcggctctgc gcggcgatcg caaagatcg cctttgccgg 60
cgttgggggc ttctgctcgg ggggtgttgta caccttctcg aacacctcg caccgacacc 120
accaccgtcg gcttgaacac cgccaacatc ggcagcanat cttgatgtcc tggatgaatcc 180
acggtgactt tggagtggaa ggcgccata ctgatcgcg gcgccaccac atgagctagc 240
ggcaggaaaa ccagcagccg ctcacccttg cgcagcagcg tcgggtgata tgctggcgcc 300
cc 302

<210> 254
<211> 291
<212> DNA
<213> Mycobacterium tuberculosis

<400> 254
agtcaangt cagtccggtc tctctccga ctacggccaa gaactggggc gacggtgtca 60
gtgcagaaca gcggaactg gtggcgccct aggcgagcga acgctcaca acggcggtga 120
ccgcttctgg tcgtgcacca tcgagccgtg ccagcccg ccgcgtgccg tcagccgcat 180
ccactggatg cccttctcgg cggtttcaat cangtacagg cgacgttcgc caccatcgtg 240
ccggggcacg gttagcgaga aacgccgact tcaccgattg ctcggtgat g 291

<210> 255
<211> 454
<212> DNA
<213> Mycobacterium tuberculosis

<400> 255
agcttcgagg cgtggcgatc gcggttcaag gcgcgctctt cgagcacaac gagcgaagac 60
agctcggcga cggagccttt atcgacatcc gttcgggctg gctgaccggc ggcgaagaac 120
tgctggacgc gttgttgctg acggtgccgt ggcgagccga gcgcgctcag atgtncgacc 180
gggtggctga tgtgccggcg ctggtgagtt ttcacgacct gaccatcgaa gatccgccc 240
atccgcagct ggcgcggatg cgccggcgcc tcaacgacat ctacggcgcc gaactgggtg 300

agcccttcac	caccgcgagg	ctgtgctaact	accgcgacgg	ctctgacagc	gtcgcctggc	360
atggcgacac	cattgggtcgc	ggcagcactg	aggacactat	ggtggcgatc	gtcagcctcg	420
gcgccacccg	cgtcttcgcg	ctgcggccgc	gtgg			454

<210> 256
 <211> 346
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 256						
agcttcagct	gatactcgac	cagccccact	cgggcccaata	cgtgaatgtc	tagcatcttc	60
acccgttcac	gggctantcg	agtagtagac	attgattagc	ctgaacgtac	ctccgacgcc	120
agctgacgaa	cgggtatgac	ggatggattt	cgtggtgtcg	cgcccgaggt	caattcggtt	180
cggatgtatc	tcggggccgg	atcggggccg	atggtggcgg	ccgcggcggc	ctgggacgga	240
ctatccgacg	aactggcggg	ggcggcgctc	tggtttgggt	cggtgacctc	gggcctggcg	300
gatgcggcgt	ggcgcggccc	gcggcggttg	cgatggcncg	cgcggt		346

<210> 257
 <211> 339
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 257						
ctgggtcatgg	acgttgctcc	ggtagtggtt	cactgccgat	cctcctcggt	gagagtgcc	60
cctcaggggt	gggtaggggt	gggtactcga	aaccaagtta	cccaccagta	acaccgtcaa	120
aatatatccg	ttgcataggt	caatgcaagt	tgatgtgagc	tacattgcac	caactaacta	180
accaaccggt	tgggttagcg	gtgacccctg	ccgtgtcggt	cctctcacct	gcggtgatag	240
cgatcaaagt	aagaatatgc	ggagtctagg	gcggcgacgc	ctggcancgt	agatcatcgg	300
ctcacgcgga	tgcggcctct	tggtacggac	atgcgcgcg			339

<210> 258
 <211> 182
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 258						
ctcgtgagta	gcacccctgt	aatttgaggat	cggcaaaaag	gcgaatcacc	gcgtggccac	60
gacacgccgg	gagggacnat	ctcggggcgg	tagggcttct	cgcggaagg	cccgaacgta	120
cggcggttca	acacgtcgcg	tcgccctccg	accgcgaaca	ttcggggatg	gcagcaacct	180
gg						182

<210> 259
 <211> 213
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 259						
ggatcaacta	cgggccaacg	gtgattcttg	ggcgccgctg	acgcgcgaac	gacccagcga	60
cacattcagc	agatggccag	cgcgtgcggg	gccacgatgt	tggtgctcgg	cggctactcc	120
catggtgcgg	cncgtgatcg	acatcgtcac	cgccgcacca	ctgccggcct	cgggttcacg	180
cagccgttgc	cgccgcgacg	ggacgatcac	atc			213

<210> 260
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 260
aggaccgtca gcacggcgac gtgctactcg ccgagcagtg ggaatcgctc tgcagcaaac 60
cattactctg cgcgacgttc gagatgacct tctgaatgga cggatctacc tgccgcgcga 120
cgacctggac cgcgtatgcg tccgcctccg cctggacgac accggggcac tctatgacct 180
cgacggacgg ctgcggttac tgcctgcgtt caccgccgac gcccgcacgg tacgcgtcgg 240
gactgcgctg agtccanct cgacgccgta gcgctgctgc tgtgcggcca tgtctggcat 300
ctaccgccgt cgctcccttg a 321

<210> 261
<211> 334
<212> DNA
<213> Mycobacterium tuberculosis

<400> 261
cgactctgtt ggccactgcg ggtcgatctt ggggccgccc cggtcgtgga acgcccaggt 60
caccggcgcg cgcaccgcgg tcagcgcgtc gttggccagc gtggtcacat ggaagtggtc 120
gacgacgagc ttggcggttg gcagcagccc gggcgtgcgg atcgccgagg cgtatgcagc 180
ggcggggctc atggccaccg tactggatgc tctcccgaa ctgcggtgtg cgcgcttgca 240
gccatgccag caccgccgcg ccgcgcgggc cttcatgctg ccataaacc ctgataccgg 300
ccaggtcgac naaccngtat cccacggtca accc 334

<210> 262
<211> 208
<212> DNA
<213> Mycobacterium tuberculosis

<400> 262
cacacggacg gcggtgcgga cgcagctgac gcgcatggtg gtcagcatcg cggccggtct 60
gctgttgtat gcctacttcg cgccgcgcaa atgctggtgg gcggcggtgg tggcgctcgc 120
atggctgggc tgggtgctga cccaactctc gaaccacacc ggtgggtggg ctgggctatg 180
gcctgccata tcggcctggt gttctacn 208

<210> 263
<211> 233
<212> DNA
<213> Mycobacterium tuberculosis

<400> 263
ccgatatccg agccgatagc tggcgggctc ggggtggtngc cagcggcgct gcgacgaaag 60
tgtgaccgtc atgaaacaga caccaccggc ggccgtcggc cgtcgtcacc tgctcgagat 120
ctcagcatcc gcagccggtg tgatcgcgct ttcggcgtgt agtgggtcgc cgcccagacc 180
cggcaaacgc cggcccgcga caaccccgga acaggaagtc cggtcaccgc gcc 233

<210> 264
<211> 320
<212> DNA
<213> Mycobacterium tuberculosis

<400> 264
gcttcaggac aaattgnatc cctatgcacc cgttggtcac cccatgagtg aagactgcac 60
gcaatcgccg gaatccggca aaaccctgca caagcgaaat caaccggagg ctgacaaggc 120
aacgtcgggtg atccgtaccg cctgggttggg caaacggcag aaggcgccctc gtccgggtcca 180
tctacgccga gcacactggg gatagcgcca tcggcatcgg tgcggccacg gtggagacga 240
acgtccgcng gcgtctgggt cagtaacccg ccgaccagtt ctccgggaag ctggtcaaca 300
tcgggcgcca cgtctccaac 320

<210> 265
<211> 304
<212> DNA
<213> Mycobacterium tuberculosis

<400> 265
gtttggcggc cttattgcac tgagggtcgtc aattgaccca cagcggaaat gccgactatt 60
cgcaggccctc cttcgccttg gctgccggag atgggctccg cgggaaccgc atgcaggtat 120
atgacctcgg tttctcgggt gctaccgcgt gccttggtcga ggatgaactc ggcgttggaa 180
ttgtccagcc ggcccaattc atcgagcgca gattcgtaga catggccggc ggcgacatac 240
cttcaccgtg gatctgctcc acacggaccg ccctgtcggg atctgctcac gggtaaagga 300
atta 304

<210> 266
<211> 217
<212> DNA
<213> Mycobacterium tuberculosis

<400> 266
gcgcactcct ccttatecgt ccgctctgca tcgtcgcggc gcggtcaggt gcaaaccgct 60
tcgggggttg gggctcctgcg gagcacaccg gatacggagc gcaacgcgtc gcgttgtgcg 120
ggcaaacaag tgtgcagggn ccaatgccat gtccagcagc ttatcagtggt cgaacgtgcg 180
aacgtcgcgc cttcgccggg gcctgaatct ctacaag 217

<210> 267
<211> 174
<212> DNA
<213> Mycobacterium tuberculosis

<400> 267
cgctgaaagc caccattcgc gggtcggggc ccgggctcgg gccgccaggc tgctccgctc 60
ggatgatggc cgcaccgcg acaccaccg gctgcgctac gtcgagccat accgggcgga 120
gctacatcgg ctccggccgc tagtggtcgg gncctctttc gaggtcgagg tcga 174

<210> 268
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 268
tgtaatttgg gatgggcaaa aagcaaanca ccgcgtggcc acaaaccgcg ggagggacaa 60
tctcgggcgg ctagggtctc tcgcgggaag ccgcgaaacgt acggcggttc aacacgtcgc 120
gtcgcctcgg acgcgaaatt cggg 144

<210> 269
<211> 216
<212> DNA
<213> Mycobacterium tuberculosis

<400> 269
cttgggcaac atgctgagga tcgccttttc accacgcggt cgggggtggcg ttgcattagc 60
tcaccgatgg tgcgcttggt gcaggccgcc gggatacccg agtgccggta aaccatcttg 120
tgctgcagtt tgtcccgtg atggcgacct tgtcgcgttg atcacgatga cgaagtcacc 180
gccatcgaca ttgggggcca actcggcttg tgcttg 216

<210> 270
<211> 199
<212> DNA
<213> Mycobacterium tuberculosis

<400> 270
gcatgcttca ttatctaata tccagccgtg gtttaatcag acgatcgaaa attcatgcag 60
acgggtccaa atagaaagac attctccagg caccagttga agaggttgat caatggtctg 120
ttcaaaaaca agttctcatc cggattgaac tttaaccaact tcatccgttt catgtacaac 180
atTTTTAGAA ncatgcttc 199

<210> 271
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

<400> 271
atactcaage ttgatgccgc cgaaaccgag cgtgagcacg ccgccagcca ccacgcgcgg 60
gtcggggcgc gggcccgggc cgccaggctg ctccgctcgg tgatggcacg ccaccgcgac 120
accaccgggc tgcgctacgt ctatccatac cgggcggagc tacatcggct cggccgccca 180
ttgttcnggc cctctttcga ggtcgaggtc tataccgatt tgcgcatccg 230

<210> 272
<211> 188
<212> DNA
<213> Mycobacterium tuberculosis

<400> 272
tccgtactgg tcgggtacgc ttcggtcgca gtgtgcgagt gatagatgac gaccgggacc 60
tcgtcggcat cttccatagc ccgccacacc ttcagttgct caccggaatc caaccggtag 120
aaggtcggcg agcgcctcggc attggtcatc gggatatgcc gctcgggacg gtcagaacct 180
cgggtccg 188

<210> 273
<211> 158
<212> DNA
<213> Mycobacterium tuberculosis

<400> 273
gttctcgcac gatttcggat tagcgggatg gtctcaattg ggtatgcggg gaaggcgctg 60
acattcgccg cgattagctg tttgatggac cgggggtgat ttttgatcac ggaaatgggt 120
gtttatncag gtcgcacgct ttcacccggg gcggaacg 158

<210> 274
<211> 237
<212> DNA
<213> Mycobacterium tuberculosis

<400> 274
gggtgtgcct gctgtgtatg cacggcatac ggacatcctt cccctgaaga cccgcggtcg 60
aacagccacg tgtccatcat canggggtca accccggcca agggcgacgg cacgccaagt 120
tcgccgaccg ttaacctagt gctgttagct tcatttgctg cgagcaaaac agctggtcgg 180
ncgttaggaa tgaattgaaa ctcaaccgat ttggtgccgc cgtaggtgtc ctggctg 237

<210> 275
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 275
actaccgggc caacggtgat ntcttgccg ccgctgacng cgcgaacgac gccagcgacc 60
acattcagca gatggccagc gcgtgccggg ccacgangtt ggtgctcggc ggctactccc 120
anggtgcggn cgtgatcgac atcntaccg ccgcaccact gcccggcctc gggttcacca 180
gccgttgccg cccgcagcgg acgatcacat cgcttttatt tnntnttcng gaatccctcg 240
ggccgcgctg gcgggctgat ga 262

<210> 276
<211> 222
<212> DNA
<213> Mycobacterium tuberculosis

<400> 276
acgtcgggan actgttcgcg ttcacccctcg tctcggcgga ttggtctgct gcgccggacc 60
gaccgatctt cagcgggggg tcacgctccg tggggtgccg ttacttccga tcgccagtg 120
tgccgctgct gtggctgatg ctgaacctca ccgcgttgan ttggatcggt tcgggatctg 180
gctggtggcc ggaacgcnat ttatgtcgct acgggcgccg gc 222

<210> 277
<211> 166
<212> DNA
<213> Mycobacterium tuberculosis

<400> 277
gctcaaaggc actactggca ccaaggccca cacgtcacct gtgactcctg cgccgacccg 60
cccaggtct ggccgttaca ccgaacgggc gagccgggag ttggtaccat cgaacaagac 120
aaggtgcatg ggcggagttg ttccgccact tcgtcgatga cgggtc 166

<210> 278
<211> 330
<212> DNA
<213> Mycobacterium tuberculosis

<400> 278
cgataccggc tgcttaccga gacatccacc atgccaccg aatcaccgca cgcgccgaaa 60

tcgcacaaca	gcttgacgcc	ttgcagggtc	cgcgattgga	attgccgacg	gtctctgacg	120
gcgtcgacct	tggcagcctc	tacgagctct	cggaatcact	tgcccagcag	gggggttcgat	180
gagtgtcaca	ccgaagacct	cgatatgggc	gcaatcctgg	ccgacacatc	caaccgggtg	240
gttgtgtgct	gcggcgccgg	tggggtcngc	aanacactac	cgcgggccgcg	ctggcgttgc	300
gcgcggccga	atatggccgc	actgtggtcg				330

<210> 279
 <211> 332
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 279						
cgctcgctgc	gtggtatgcg	atagccatcc	cgtcggggcta	ctcgccatca	ccgatcagct	60
tcgccccgaa	gccgccgcgg	cgatttcgcg	tcgcacaaa	ctgaccgggg	ccaaaccggt	120
attgcttacc	ggcgacaacc	gggccaccgc	cgatcggtc	ggtgtacang	ttggcatcga	180
cgacgtacgg	gccgggctac	tgccgacgac	aangtcgcag	ccgtgcngcn	gctgcaagct	240
ggaggtgcc	gattgaccgt	ggtcggtgac	ggtatcaacg	acctccggcc	ttagcggccg	300
cgcatgtcgc	atcgccatgg	gcagcgcccg	ac			332

<210> 280
 <211> 222
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 280						
gcacgcaatc	gaagtcaccc	aaaccggggc	ggccaggcgt	ctnacgccac	gtcnaccage	60
cgcaacctca	acccggccac	ggcgagctcc	tgatcaaggc	cgaggccatc	ggtgtctact	120
tcatcgacac	ctacttcgcg	tccgggcaat	atccgcgcga	actcccgttc	gtcatctgct	180
ccgaagtatg	cggcacggtg	gangccgtcg	gccaggggtt	ac		222

<210> 281
 <211> 184
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 281						
tcgactgtgt	ggccacagat	cacgccccgc	atgccgagca	cgagaaatgc	gtcgaattcg	60
ccgcggggccg	gccggcatgc	tcgggttgca	gacggcattg	tcggtggtgg	tgcatacaat	120
ggtggcgccg	gcttgttgan	ttnggcgcga	tatcgcgcg	gtgatgagt	anaaccggcg	180
tgca						184

<210> 282
 <211> 409
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 282						
gaacctgaca	ccctggtcac	gggtgagcac	ggacttgatt	tcttcnctat	tggtcggcgc	60
tggtgagcac	accacgccgc	tgacggccgt	cgcgctctcg	ctgtgctcgg	tctgggtggag	120
cgcgctgccc	gcggccnaac	atcntaaatc	aagcgatttc	gtcaacagat	atcatcaatg	180
tcggcgctgg	actattcaaa	tcatcgatat	actggtgacc	tggtccttcg	ccatcgatca	240
atggcgatag	tcacgcaa	cgtcacggac	atcgctcgcg	tcccagctgg	cccgtgccaa	300
cagatgctgc	aaccatcgg	ggtggtatca	ccgcggtgct	cggcgatggt	ccacaattct	360

tgcggtccaa gccnnaaaca tcccgggcat gaattcaccg gcatgcgcn

409

<210> 283

<211> 413

<212> DNA

<213> Mycobacterium tuberculosis

<400> 283

ctatcgtacc	cgcgccggtc	accttctgga	tatcgccggc	ctggtcaagg	gggcgtccga	60
gggagccggg	ctgggtnaca	agttcctggc	tcatatccgc	gaatgcgacg	ccatttgtca	120
ggtggtgcgg	gtgttcgtcg	acgacgacgt	gactcatgtc	accggacggg	tcgatcccca	180
gtccgacatt	gaggtcgtcg	agaccgagct	gatactggca	gatctgcaaa	ccctggagcg	240
ggccacgggc	cggtctggaga	atgaagcgcg	caccaacaag	gcgcgcaagc	cggtctacga	300
agcggcactg	cgtgcccagc	angtgctcga	cgccgggcaa	gacgtgttgc	gccgcggggg	360
tggatgccgc	cgcgttgcgc	gactgaaact	gctgaccacc	aagcccttcc	tgt	413

<210> 284

<211> 283

<212> DNA

<213> Mycobacterium tuberculosis

<400> 284

tactcaagct	tcaggccgcc	acgtccgccc	tccgtcggcg	acgtgacctc	gagcgccgag	60
ttcgactcga	catcgccgcc	ggcgcatgcc	gacatgaacg	cggcactcac	cgcaagcccc	120
tcggacgtca	ggtcgatcga	ctccgcttca	agcaccggat	cgtccgggca	actcgcggcc	180
tcggcctgtg	cgaacggcac	accgctcgtg	gcggcncccc	gcgcggaact	gggctcatca	240
cggtcgttgc	gagccggtcg	cgtcaccgcg	taccgacgcc	gtc		283

<210> 285

<211> 397

<212> DNA

<213> Mycobacterium tuberculosis

<400> 285

ccgacatcga	gtgggctcgc	agtgacttgg	cgacctccaa	gccaccggta	cccgcgcgcg	60
ggcaagccaa	ggacgacgac	ggccttgccg	gatagctgcg	ccaggcggtg	cgccaactgg	120
cgtccagcgt	cgccacgata	gtcaaagagc	ttcatctgcc	gagtgtgtcg	ccatctcatg	180
gctccaaata	tgggaattagg	tccctggggc	gactgacgac	agtcctctcag	cgaccggatt	240
gcgcataccc	ccttgtagcg	tactccgcaa	atcccgggct	tgcgtccgcg	gaagcgaact	300
cggcggcgct	acgtggtggg	tcacttcggc	cgtgcgcact	cggatcgacg	ggccgatggg	360
ggccggggcc	gcgcgcttct	tggtcatccg	attgagt			397

<210> 286

<211> 342

<212> DNA

<213> Mycobacterium tuberculosis

<400> 286

atactcaagc	ttgtcgcggt	aaaccgcacg	cagggcggtg	ggtgcggtgt	caaagacacc	60
cacacttctt	tcgggttcgg	tgatctcgac	accggccgcg	agccgaccac	catgcgcgcg	120
tagatcggcg	atcagcgcgt	cggctatcgc	ctgggtgcgg	cccaccggaa	tcggccagcc	180
gaccgaatgg	gccagcggtg	ccagcatcag	tccggcgccg	gccgacacca	gtgacggcaa	240
cggtgaaatc	gcgtggggcg	caacgcgcgt	gaacaacgcg	cgggcatact	cgcccgccaa	300

cgaccgccag gcaggggtgcc tgggccatca tccgcagccc ga

342

<210> 287

<211> 430

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 287

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tggactcata acgatcgggt cagcgacgcg ccaacacgaa cggccggacg agtgggccag 60
ggtcgcgcct cccctacaaa caggatccgt tgcctgcgag cgacaggctc cgggtgcggcg 120
ttggggcgccg tgctcgtccc agcgtccgggt cccgggtcgc cggcgacgct tgtttcctcc 180
atactcgcgc cctaattctcg aggcagcccg taccgcgagg caacctccca aaaatgcaat 240
ccccaaaaat gcaatgcgtc gagctatttc tcacaccgac cgctagttgc ggatcagaaa 300
tccgttgggc gcggaagtcc agccgaattt gttctcccgc tccgcatcat gcttgtaatc 360
gtttggaaat catcctcata tgccctcgatc gcttcatagg tcaagcccaa acccggcagg 420
atgggtggcc                                     430
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<210> 288

<211> 473

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 288

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ctttacactt tatgcttccg gctcgtatgt tgtgtggaat tgtgagcgga taacaatttc 60
acacaggaaa cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac 120
tcaagcttag tggttgcgca cgtaaattcg tcaggtgacc gatcccctgc tgtctcactc 180
gcctcacagc gaccaccacg gctggcgctc aaggcgggca cgtgcggagc agatgaggaa 240
tgtgcgacgt cttgatgcag cctgtcagaa caccgagacc ctcgacgaac ttacgatcga 300
aaccgcttag gccaaccggg gacgggggtg tctttccgcg gctagggcgc cttatcgtcc 360
gaaggccgtg ggtggtgatc gccttctggg tcgcgcttgc ggggtctgct gcgccgacgg 420
tgccgtccct ggaccgatct cccagcggca tccagtggcg attctgccat cgg 473
```

<210> 289

<211> 418

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 289

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caggcatgca agcttgcgat gtatcaacac gccgttgccg agcgtgagcc gatagttgac 60
atccggctcg gtgaagggtga aatcgatggc caggtcgagg tcccatgcgc gtgggccatt 120
gatgctgac gccaggacgt caaagatttg gtccggcgct agctgggcga aaaacgtggg 180
cgccgggact tgcccgagc tgcccggggt cccgtcgcgc agctcggcgg ccccggtcag 240
aaagaaattg cgccaggctc cacactccgc gccgtaggcc agctgctcca cgggtgtcggc 300
atatagcccg cgggccgcag cgtgctcgct gtcggcgaac accgcatggt cgagaagcgt 360
tgccgcccaa cggaatcac tgcgtcaaag cttcgccggg ccaactccagc actccgtc 418
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<210> 290

<211> 194

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 290

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atactcaagc ttgaccgacg ctgatcgcac cgcacgcggg aacctcaagg gcactactgg 60
```

cacaagggcc cacacgtcaa cctgttaact cctgogccga ccccggccga agtccttggc 120
gttaacaccg aacggggccaa cccgggaatt tgggttccat caaaacaaat agcaggtgcc 180
tgggaggagt gttc 194

<210> 291
<211> 166
<212> DNA
<213> Mycobacterium tuberculosis

<400> 291
gtcgtcgtgt gctggggcgt ccgtatcagc acgcccacga aatggggcac aagaaggatt 60
cctggaacgg tggctgtcca agatcacctt cgcccaaac tgctacgggc acttctacat 120
cgagcacaac cgtggccatc acgtccgcgg tgtccacacc gggagg 166

<210> 292
<211> 291
<212> DNA
<213> Mycobacterium tuberculosis

<400> 292
atatgccttg ctgagctttt cggatcgcag cgagtcgtac ccgcgccggt caccttcgtg 60
gatatcgccg gcctgggtcaa gggggcgctc gagggagccg ggctgggtaa caagttcctg 120
gctcatatcc gcgaatgcga cgccatttgt caggtgggtgc ggggtgttcgt cgacaacgac 180
gtgactcatg tcaccggacg ggtcgatccc cagtcgcgaca ttgaggtcgt cgagaccgag 240
ctgatcctgg cagatctgca agccctggag cggggccacgg ggcggctnga a 291

<210> 293
<211> 442
<212> DNA
<213> Mycobacterium tuberculosis

<400> 293
gacaccctgg tcacgggtga gcaggactcg atttcttcgc tattgggtcg cgctgttgag 60
gcacagcacg ccgtgagggc cgtcgcgctc tcgtgtgct cggctctggtg gagegcgctg 120
cccgcgcccg aacatcgtaa atcaagcgta ttctgcaaca gatatcatca atgtcggcgc 180
tggaactattc aaatcatcga tatactgggtg acctgggtcct tcgccatcga tcaatggcga 240
tagtcacgca gatcgtcacg gacatcgtct ggcgtccagc tggcccgctg caacagatgc 300
tgcaacccat cgggggtggtg tcnccgcggg gctcggcgat ggtccaacaa ttcttgcggt 360
ccaagcccgga aaccatccgg ccatgagttc accggcatgg cgcaacggct ggtgccgggc 420
aaaacgcggc gcgatcgaat tc 442

<210> 294
<211> 150
<212> DNA
<213> Mycobacterium tuberculosis

<400> 294
tgtagaaggt ggggtccgct caacttcgcg gcgggcgccg gatatgcctt gctgggtcttg 60
ctcatttgat atccaatcta tgggtcgtgg ttactcaacg ggccgaagct ggccctccca 120
cgggtagggg cctattcgac ggtgatgtcc 150

<210> 295

<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 295
cccgaatccg gtggccggca gggggcctgg cgacgtggac accttctaac ttgtctttac 60
cggtcactgt tgcaccccaa cacctttaac gacgtggacg gacgttacat cggattcgac 120
ggtgtcatcc acagcgttgc cattggggcac acccactacg ccaatttctc cgactgggac 180
acctaccgca gcctcgcccc actgcaggga ctgttggtcc cgcaacgggc catcgacatg 240
atccagtcgt tggtagccga cgcggagcag actggtgcgt atccgcgttg ggcgctggcg 300
aaattccgcc accggcatga t 321

<210> 296
<211> 184
<212> DNA
<213> Mycobacterium tuberculosis

<400> 296
ttgagatgct ggtcgggatg ccgatggttg gaacatggtc ccctggcgtc gaatacgcgc 60
gagcgcgatga gctcaccggg tcggaacaac gtatcgaaga actcgcaactg ctggcagatg 120
gtatctccga tgtggttgta atttgtatcc caactctaac tgtgctatcg gatctgcgtg 180
aata 184

<210> 297
<211> 259
<212> DNA
<213> Mycobacterium tuberculosis

<400> 297
cgtaatcacg atcccgtga gacacttgac cttacggccg aagtgaactc gctgctgcta 60
tgccgacacc cgatttccat acgctgctgt acacgacggc cgggcccggg gcctccatca 120
cgctcaaccg cccggaacag ctcaacacca tcgtcccggc catgcccgcg gagatcgagg 180
ccgctatcgg gttggtcgaa cgcgaccagg acatcaaggt catcntnctg cgcgggtggcg 240
ggcgcgcctt ctccggcgg 259

<210> 298
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 298
caagcttaag ctggttccgg ccaactccatg agccgtagtg caatggttcg tgcacggcga 60
ggccgaactt gccataaaca tccctgacga aagtctccgg caagccgatt gcttcttcgg 120
gcccgttctt gtggattgtc cgataaccgg gtccctcatg ctggaagttg tgcgcactct 180
ttccttcgcg gatgtgggct aacgactcgt cattgagcaa gaagtacgtg cacaggcatc 240
gtccgcccgg cttcagcacg cgggagatct cgtccagata gtgctccacg tccgngggga 300
aacatgtggg tgaacaccga ggtnagaaac accncatcca acgacgcacg cgggatatgg 360
aaagcgaaa 369

<210> 299
<211> 387
<212> DNA
<213> Mycobacterium tuberculosis

<400> 299
tattggtcttc gtcgaccagt acgtcgtagg cgccatgagc cagcgactga agccgcgcca 60
tgcctgcacg gcccgtcat ccagcgaggc ggccatctcc cgcagatagc ctgccgcctc 120
ggcgcgcacg ctgtccgat cgcgtccgag ctcgctcgcc agcgcacgca gccgctcgtc 180
ataccatcgg gcatccagca gttgggtaac ctcaacgggg tcggtcgcta gcggcgctcat 240
tgattcagca acaataccga tgcgctgcag caactttcgc agtccgatgc ggcccacctc 300
ccgtgcagtc actggctagc ccccgatg cgggttggtg cgatggcacg gcagcgggct 360
cgtaaacctg cggctctcagc tcgctgg 387

<210> 300
<211> 73
<212> DNA
<213> Mycobacterium tuberculosis

<400> 300
gcttagcggg cttgctcgaa ccgacattgc gtgccactca tgagcgggtg gcggtcgagg 60
tgcttacaca tct 73

<210> 301
<211> 156
<212> DNA
<213> Mycobacterium tuberculosis

<400> 301
gtatctggcg cctctcgaat atccttgaac gtcccgcggt gccaccaga tagatcgag 60
cgccctgcaa tggagttccc tttatggcct ctctagcctc ccgcttgatc ggctcgacct 120
gagagatgcc ctcgggcggt gcgggatctc cctcca 156

<210> 302
<211> 394
<212> DNA
<213> Mycobacterium tuberculosis

<400> 302
cttcacgccg atccgcgacc gcgaacgcga cgggtgacggt gggcgacaag gttcggttgg 60
tcgccgcggc gctgggcat atcagctcac ccggtttcga ggtgttcggc gaccggacgg 120
tgctgcagac attcttgagc gtccctgacc ggcccgattc ggccttcaac atcgtgacgc 180
cgtatttcgg cggtagcgct cggcgccgag tcgaaggcgg cctgagctaa agccgggcat 240
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gcgcgctgga ccggtatctg cgttcgctgg ggatcggggc naccgnant tgcggttgcga 360
nctgattccg gtggagctcc aatctgactt cggg 394

<210> 303
<211> 404
<212> DNA
<213> Mycobacterium tuberculosis

<400> 303
gcagctaccg accctagcga cgagtgtgtt cgcagcgctc aatgtgaacg ttcggcggtga 60
ttcggcgcgc gggttccgcg tctcagcgca cgttcggcgc cgaggnggct agtccctggg 120
taagcaatgt ctcggtcgcc gccagcagcg cgcgtgctgc caaccgctcn acccggttgc 180
gcatgtccgg taccgacgga aacgacggcg cgatccggat gttcttctgc tccggatcct 240

ttcgatacgg	gaacgacccc	cgcctcgggt	caccgcgata	ccaacgtcct	tagccaangc	300
tacngtccgg	cgcgcggtcc	cgggcaacac	gtcgaagctg	atgaantaac	cacccttggg	360
ctcgggtccaa	gangcgatct	tggactcctt	aaccgctgat	ncaa		404

<210> 304
 <211> 479
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 304						
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ttgagcgccg	tcggtggccg	tggtcagcag	ctgttcgcga	acgcaccagg	tcacatccct	120
tcgacatctc	accgacgtgg	cacgggcgac	atcaacagga	agattgacga	atccctcgca	180
ggcgcgccac	gtccgcaggc	caacgccaa	tacggggcca	ccagcgatcc	tccgctcacg	240
caccagccca	agccaggctc	anccacccaa	gtcggcccgc	gctctccctc	gccccctggg	300
ctccggggcc	ttgttaaaca	actaccggaa	gtccaccaat	cctcgctgca	tctcgacacc	360
gtccgcctca	ctcccttcct	cccgcccctc	tccacacnac	acacctcttg	cattaaggctc	420
acggagcggt	cacttttcgt	cggacgaaat	tcgcaatccg	gccgctcgcc	gccagagat	479

<210> 305
 <211> 260
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 305						
cggaaagtgg	atactcccag	caggtagcag	gtcgccacca	cgttggtcag	tgcgcgttca	60
gctcgcttgc	ggcgtgcag	cagccagtc	gggaaatagc	tgccctggcg	cagcttgggg	120
atcgcgacgt	cgatggttgc	ggcacgggtg	tcgcaaata	cgggtggcgg	agccgttgcg	180
ctgattggac	cgctcatcgc	tgcgttcgcg	gtagcccgc	ccgcacaggg	cgtcggcttc	240
agcccccatc	aaggcggcga					260

<210> 306
 <211> 464
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 306						
ggccgagtc	agcacttcgc	actatgtgca	gaccaaana	cgggtggctc	ccgcgctgcg	60
gcagcggtg	gcaacggcgc	cggatgatc	cgagtggctg	gnagttgccg	accggcagtt	120
cgcccggggc	ttactacgag	aagggcctgc	gcgacgtcat	caggtatcac	gtgtcgatga	180
cgctcgagcg	taacttcccc	gaccagacgg	cgacctcgcc	gatggacccc	gcgttgtacc	240
tgggtgtggg	gcaagctaac	gccgccgan	gctatcggtg	ctcggtcgaa	gcgcagccgg	300
ggtcgcaagc	gctagcgggc	aaggtcgcca	cgatctcggt	cacctggacc	aactacggcg	360
ctgctgccgc	caccgaatag	tgngtgcccg	gctaccggct	ggtggattcc	acgggacatg	420
tggttcggac	ctgccggcag	cggtggaact	gaagangctg	gtct		464

<210> 307
 <211> 315
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 307						
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tcgcgacacc	gtggcgccga	gcgcgcgtgc	cggcaggccg	attaggcggg	cagattagcc	120
cgccgcgggt	cccgggtccg	attacggcgc	cccgaatggc	gtcaccgggt	ggtaaccacg	180
cttgcgcgcc	tgggcggcgg	cctgcccgat	caggtgggtat	atgccgacaa	agcctgcgtg	240
atcgggtcatc	accaacgggtg	acagcagccg	gttgtgcacc	atcgcnacg	ccaccccggt	300
ctccgggtct	gtcan					315

<210> 308
 <211> 331
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 308						
gctcgcgggtc	cagcagcaga	cgtgtctgac	cccgcgcgcc	ggccgcgggt	accgaaaccg	60
gatcggccccg	ccgatggccg	cggccacggc	gtctgcctta	cccggcccgg	ataccagcag	120
ccacacctcg	cggaacgct	gaatcgccgg	cagggtaag	gtgattcggc	gtggcgccgg	180
tttcgcgaat	cgtccaccgc	caccaccatg	cgggtgctct	cgaagacgcg	gggctgtgcg	240
ggaacagcga	gttaatgtgg	ccctcggggc	ccatgccag	caggtggacg	tcgaaattcg	300
gcccgggtca	cctgggtgcg	cactggcgcc	c			331

<210> 309
 <211> 286
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 309						
agcttgctga	tcgtccggca	gcgtccggcg	agtcaagtcg	aagccagtcc	ggctctcctct	60
ccgactacgg	ccaagaactg	ggcgacgggtg	tcagtgcata	ccagcggana	ctggtggcgc	120
cctaggcgag	cgaccgcctc	acaaacggcg	gtgaccgcgt	tctggtcgtg	caccatcgag	180
ccgtgcccac	cccggccggc	tgccgtcagc	cgcattccact	ggatgccctt	ctcggcggtt	240
tcaatcaggt	acaggcgacg	ttcgccanca	tcgtgccggg	gcangg		286

<210> 310
 <211> 331
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 310						
ttggtgatca	tcgncccaac	gaccccgagg	cgatgttctt	gcacaccgag	gagtgtcgca	60
agctgggggt	ggccttcgcc	gccgatccgt	ctcagcagct	ggcgaagctg	tcgggggtgag	120
gaaattcgca	ggctcgtcaa	cggtgctgct	tacttggtca	ccaacgacta	ctaattgggat	180
ctgctgctgt	ccaagaccgg	ctggtcagan	gccgatgtga	tggcgagat	cgacctgcgg	240
gtgaccacat	tgggtcctaa	gggtgtcgat	ttggtagaac	ctgacgcacc	accatccacg	300
tcggcggttg	tccccgaaac	agccagaccg	a			331

<210> 311
 <211> 458
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 311						
ggctcgtatg	ttgtgtggaa	ttgtgagcgg	ataacaattt	cacacaggaa	acagctatga	60
ccatgattac	gccaagctat	ttaggtgaca	ctatagaata	ctcaagcttg	atattgatca	120
tcattgatgat	catcaccgga	agtgtggtag	cgcagtggt	tatcgtgggt	accgtcgtgc	180

tttccatggg	cgctcttttc	gggctttccg	tattggtctg	gcaggacatt	ctgggtatcg	240
agttgtactg	gatggtgttg	gcgatgtcgg	tgatcctgct	cctggcggtg	ggatccgact	300
acaatctgct	gctgatttcc	cggttgaaag	aggaaattgg	ggccggattg	aacaccggaa	360
ttatccgtgc	catggctggg	accgggggag	tggtgacggc	tgccggcatg	gtgttcgccg	420
ttaccatgtc	gttgtttgtg	ttcagcgatt	tgcaatt			458

<210> 312
 <211> 289
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 312						
caggcatgca	agcttggcgt	gccgttccaa	cccgaattgg	ctttcggcgc	catcgggtgag	60
gacggcgtgc	gggtgctcaa	cgacgacgtc	gtccgcggga	cacacctcga	tgctgccgcc	120
atggacgcgg	tgaacgcaa	gcagctgac	gagctacaac	gccgcgcgga	acgtttccgc	180
cgcgggcgtg	accgcatccc	gttgaccggg	cggatcgcg	tgatcgtcga	tgacggcatc	240
gccaccggag	cgacggccaa	ggcggcgtgc	caggtcnccc	gggcgcacg		289

<210> 313
 <211> 154
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 313						
ggcatcttgg	ccgccatggt	agccacactg	ccaccggcta	tagaagcgat	gcgcaccgtc	60
ctgccagcac	attgcggcgc	tcctccctgg	aaagcaagat	aaccaagctc	atgccgtggt	120
tgtgggtggc	gtggtttggt	ttgggtaact	ttgg			154

<210> 314
 <211> 324
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 314						
tcggctaata	atcgtcgacg	ccggcctcct	ctgcaatcgc	cttggcggtc	gccggggttgt	60
caccggtgat	catcacggtg	cggatgctca	ttcggcgc	ttcgtcgaat	cgttcccgtg	120
tgcccacctt	gacgatgtcc	ttcagatgga	cgacgccgat	ggcccgcgcg	ctgctgttat	180
cggtccattc	cgcaacgact	aggggtgtcc	cccgcgggag	ctgatgccgt	cgacaatggc	240
accacctcc	tcggtggggg	gggcaccgtg	atcggaacc	cacttcatca	ccgcagccgc	300
ggcaccttgc	ggattcgacg	gatg				324

<210> 315
 <211> 322
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 315						
ctcaagcttg	gagggcgtgg	gatcgcggtc	caaggcgcgc	tctccgagca	caacgagcga	60
agacngctcg	gcgacggagc	ctttatcgac	ntccgttcgg	gctggctgac	ggcggcnaaa	120
taatgctgga	ctcgttgttg	tcgacgggtg	cgtggcgagc	cgagcgccgt	cagatgtacg	180
accgggtggt	ctatgtgccg	cggttggtga	gtttccacga	cctgaccatc	gaagatccgc	240
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gtnatccctt	cnccaccgtc	gg				322

<210> 316
 <211> 404
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 316
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 gcgaggtcat cgcctatgcc tcgcgggggg tgacgtgac cccgggtgac gtgttcggct 120
 cgggcacggg gccacactgc acgtcgtcg aagcacctca ggccaccgga aatcattccc 180
 gggctggctg cactgactgc acgtggtcac cctccaggtc gaagggtgg gcgagacgat 240
 gcagaccgtc cggacgagcg gcaactcctt tcggttggct cttcggccga atccggacgc 300
 cgaacccgac cggcgcgggg tcaacccggc accgacgcgg gtgccgttta cccgcgggct 360
 gcacaaatcc cgacgggtat gggctttgac ctgccgacgg ggga 404

<210> 317
 <211> 346
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 317
 agcttggcgt gacaccaaca cagggcactt aagatggcaa tgcgccgcct acctgcacgt 60
 tttcgcgatg tcagaggatg ccgaggggag aacaatgcga gcacggccgc tgacgttgct 120
 caccgctttg gcggcgggtga cattgggtgt ggttgccggc tgcgaggccc gagtctaggc 180
 cgaagcatat agcgcggccg accgcatttc gtctcgaccg caagcgcgac ctcagccgca 240
 gccggtggag ctactgctgc gcgccatcac gccgcctagg gtcgccgagg cgtcgccgaa 300
 cgtcgggttt ggcgaactgc ctaccgggt cccgcaggca accgat 346

<210> 318
 <211> 333
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 318
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 cggtcctggt cgcgcaccgc gtgcggccaa cgcttgagca ccaccacgc gcagccctcg 120
 ccgcgcacga atccatccgc gttggcgtcg aagctgttgc atcggccggg cgggtgacagc 180
 gccgaccact tggacagcgc gatggcgggt aacggtgaca aggtgagctg caccgccccc 240
 gccaatgcc cgtcgggttc acgcaggcga agctctgaca cgccaagtga attgccacca 300
 gcgacgacga acaagcggta tctacggcga tgg 333

<210> 319
 <211> 207
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 319
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 cgtcgggcta ctcgccatca ccgatcagct tcgcoccgaa gccgccgtgg tgatttccgc 120
 tgcgacaaa ctgaacggg ccaaacgggt attgcttacc ggcgacaacc gggccaccgc 180
 cgatcggctc ggtgttcagg ttggcat 207

<210> 320
<211> 250
<212> DNA
<213> Mycobacterium tuberculosis

<400> 320
aatccgaaat cctgaccgat acttgaacct ggtctcgttc ggcaataact cgtcggcgtg 60
caggacgcgg cgcaaacgta cttcggcatc aacgcgtccg acctgaattg gcagcaagcg 120
gcgctgctgg ccggcatggg gcaatctaac agcacgtctt tcccgtacac caaccccgac 180
ggcgcgctgg cccgggcgga acgtggctct cgacaccatg atcgaaaaac cttcccgggg 240
aggcggatgc 250

<210> 321
<211> 365
<212> DNA
<213> Mycobacterium tuberculosis

<400> 321
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ccgtgcgacg gcgaatgaaa accctcaccg aggcgcgatt gaacgccgac aagacgggtg 120
agcaggtcga agacgtcctg gacggtctgg gtaagaccat ggccgagctg aacagctcgc 180
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ccctgcacag cctggacgat ctgcgaaaac ggctcatcgt gttggctcag ccggtggaag 300
ccatcgctga tcggatcgac tacatcgtga gcctcggcga aacggtgatg tcaccgctgt 360
cggtc 365

<210> 322
<211> 413
<212> DNA
<213> Mycobacterium tuberculosis

<400> 322
nctcgatctt ggggtacggt cgatgaggct gctgaccaac aaccgcggcca agcgggtggg 60
actggatgga tacggattgc acatcatcga gcgcgtgccg ctgccgggtg gggccaacgc 120
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ccagcagctg gcacggaaaag atctgcgacg cgctgttgga cggcgccgcg aagtggccgc 360
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<210> 323
<211> 364
<212> DNA
<213> Mycobacterium tuberculosis

<400> 323
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cgatcgaccg cccaagccca catgaacaaa ccccggcacg acgttgccga tcggcatacc 360
gtga 364

<210> 324
<211> 488
<212> DNA
<213> Mycobacterium tuberculosis

<400> 324
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atgtgccggg anagccggtc cggttgccac gcaaaggcca tgtcttcgtc ggtccgacca 360
tcggtaccgg gacacggcgc tgtattgccc ggttcgctgc cgagttcgtc gcgcaactgc 420
acgcnggcgg gccagcgggtg ctcgttcanc ccggaggttc cggtgacgat gatcgtgttg 480
gtctccct 488

<210> 325
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 325
gtaggagaga acaaagaccg tcgataggac acgtgttacg ccggtagctg tcattggtat 60
ggggtgccgc tgccgggggg catctactca cccgatcggg tgtgggaggc gttgctgcgg 120
ggcgacaatc tggtcaccga gatccccgc gaccgtggg acatctacga gtactacgac 180
cccgaaccgc gcgtgcccgc acgcaccgac tgcaaatggg gcgcgtacct cgataacgtc 240
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cagcaccgct tgttgctgga aacctcctgg gaagccatgg aacacggcgg gctaacaccg 360
aaccatatgc ctcccgacan gggttttcgt ggggtt 396

<210> 326
<211> 394
<212> DNA
<213> Mycobacterium tuberculosis

<400> 326
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ccctggagaa tctctgcccg gagcaggaag tcttatgagt tgacaagcag gggcgccgcc 180
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caggttggtg tgctgtggcg tcttcatgat cgcgtccatc tcgcaggcca cccggcatag 360
tgaacgggga ccatggcctc ggttcgcggg tgaa 394

<210> 327
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

<400> 327
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caatgggaag ttgttgcccg cttgactgtc cgggttaacg ccggaattcca ccacatcccc 120
ttgcgaaagg ccgttgggtt 140

<210> 328
<211> 242
<212> DNA
<213> Mycobacterium tuberculosis

<400> 328
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ggttcgcggc acggtcaacc tgccacacgc actggtaaga ctgcccgcgt cgcggtattc 120
gcggttggtg aaaaggccga tgctgccgtt gccgcggggg ctgatgctgt cggatcgacg 180
atctgatcga gaggatcagg gcggctggct ggaattcgat gccgcgatcg cgataaccga 240
tt 242

<210> 329
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

<400> 329
agcttacgcc gctttcgctt cngatttggg acgccgcac gaaagcgcag ttggaagcgc 60
ggcgcggcgc tggtcgagct gctcaagcag ccgcaatccc agcccatgcc cgttgaggag 120
caagtgggtt cgatcttctt gggcaccggc ggtcacctgg actcggtgcc cgtcaaggat 180
gtcggcggtt cgaaaccgaa ttactggacc acatgcgggc 220

<210> 330
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 330
cgacgggacc tcgtcgcatc ttccatagcc cgccacacct tcagttgctc accggaatcc 60
aaccgggata aggtcggcga agcgctcggc attggtcac gggatatgcc gctcgggacg 120
gtcagatgcc ctccgggtccn gccagcactc ctccaggctt gtcgggggtg tcgcgaccgc 180
atggggccaca tcgcattcac caggtctgcg cgaatcacca gcacgtanac ggttcctttc 240
ctaagcaaca ccgaaatttc aggaccgaa tgctccggga aaacatgtca cggtaagtcc 300
ggtattccgg gtaccgggtg agcattga 328

<210> 331
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

<400> 331
cggcatcggg ttgggctgtc accagcagtt ggtagttctt cactactgtt gttcgagcgt 60
cgagccgccg cgcggtgtcga ggtcgccgga cgcgtaaccg ccaggccggg caggggtgcc 120
ttccagtcca cgcngctgtg gtcgggtaac cgcttatctt caatcgagac natcgccagc 180
ttcatcgtgt tggcgatctt gtccgagggc acctcgaacc ggcgctgcga ntacagccac 240
gcgatcgtgt tgcccttcgc gtcgaccatc gtcgataccg caggcacttg cccctcgagc 300
agctggggccg atccggttggc aacgacctca gaggcacgat tggacatcag ccctagcccg 360
cctgcg 366

<210> 332

<211> 407
<212> DNA
<213> Mycobacterium tuberculosis

<400> 332
ccgtcgcangc cgccgacttg gcttgaccga caccaacatg gcctgagggg gttcaacaag 60
accgtggccg acgggctgaa catcaccatg agcggcatga gccacgccac cgagttcatc 120
atgttgatcg ccgaaaacca ttggcgggta gcggaagaac ggctcgaggtg ctctacaccg 180
agtattcgaa gtcgaaaggc caaccgctgc tcaacggcgt caacatcatt ttcgacgggt 240
ttctgcgagg gaggatgccg cgatgaactg gatccagggt ctgttgatcg cgtcgatcat 300
cgggttgctg ttctacctgt tgcggtcgcg ccgaagcgcg cggtcctgtc ctgggtcaag 360
gtgggctatg tcttgttcgt gctcccggca tctatgccgt gctgaga 407

<210> 333
<211> 473
<212> DNA
<213> Mycobacterium tuberculosis

<400> 333
ttacacgncc tgcttcgggc tcgtatgttg tgtggaattg tgagcggata acaatttcac 60
acaggaaaca gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc 120
aagctttttg agcgtcgcgc ggggcagctt cgccggcaat tctactagcg agaagtctgg 180
cccgatncgg atctgaccga agtcgctgcg gtgcagccca ccctcattgg cgatggcgcc 240
gacnatggcg cctggaccga tcttggtgcc cttgccgacg gngacgcggg angtgggtcaa 300
gtccgggtcta cncctggggc tttgcgagcg gtcccgcgcg tggtcgcggg tgcgccgcgg 360
aaagcggcg gtcgggtgcc atcaggaatg cctcaccgcc gcggcactgn acggccagtg 420
ccgcggcgat gtcngccatc gggacatcat gctcgcgttc atactcctcg acc 473

<210> 334
<211> 305
<212> DNA
<213> Mycobacterium tuberculosis

<400> 334
caggcatgca agctttgtca caccaagtgt ttcgaccagg cgctccatcc ggcgagtggg 60
tactcccagc aggtagcagg tcgccaccac gctggtcagt gcgcgttcag ctgcgttgcg 120
gcgctgcagc agccagtccg ggaaatagct gccctggcgc agcttgggga tcgcgacgtc 180
gatggttgcg gcacgggtgt cgaaatcacg gtggcggtag ccgttgcgct gattggaccg 240
ctcatcgctg cgttcgcggt agcccgcgcc gcacagggcg tcggcttcag ccccatcaa 300
ggcgg 305

<210> 335
<211> 432
<212> DNA
<213> Mycobacterium tuberculosis

<400> 335
agcttagcca gtttttctac tcttgggccc acaccacag tgcttcgacg gtacgggtcac 60
ccatgatggc catccagttg gcatcgggtga gctgataaat gccagctggt ttcgccaaacc 120
cggtagcgat cttggcgcgcg tgcttggtgt cactgatacc tatcgagcaa gacagcccgg 180
tttgcgacaa gatgactttt cggatctctt cggcgacttc gatgggggtcg tcgggagtcc 240
cgggcgccac cgcgaggtaa gcctcgtccc agcccatac ctcgaccggg tatccagggt 300
cgcgcaataa cgccaccacc tcctcggacg ccgcgttgta ggcggtggg ttcgacggca 360
agaagtggcc tcagggcatc gtccggcgcg tcccacggc ntgcggcgcg gcacaccgta 420

ggcgcggggc tc

432

<210> 336

<211> 429

<212> DNA

<213> Mycobacterium tuberculosis

<400> 336

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ccggcggaac tcagacgtgc tgggtggtgcg gcatggcacc gcgggcagca aagcgcaactt 60
ctccggggac gacagcaagc gaccgctaga caagaggggt cgtgcgcagg cagaagcgtt 120
ggtaccacag ctgctggcgt tcggcgccac cgatgtttat gccgccgacc ggggtgcgctg 180
ccaccagacg atggagccac tcggcgcgga actgaacgtg accatacaca acgagcccac 240
cctgaccgaa gagtccctacg ccaacaaccc caaacgcggc cgacaccgag tgctgcagat 300
cgtcgagcaa gtaggcacac ccgtgatctg cacgcagggc aaggtcattc ccgatctgat 360
cacgtggtgg tgcgagcgcg accgtgtgcc cccgacagtc ccgcaatcgc aaaggcagca 420
cgttggtgt
```

<210> 337

<211> 94

<212> DNA

<213> Mycobacterium tuberculosis

<400> 337

```
gtatggtcag ctgtccatcc ggcgctgtcg gccgagctgc cagatctcgt cagccgtaac 60
cgggttgccg gatccacgcg tgcgggttgt ctac 94
```

<210> 338

<211> 351

<212> DNA

<213> Mycobacterium tuberculosis

<400> 338

```
ccgactttcc gcgggtaccc gctcaacttt gtgtcnacct caacgccatt gccggcacct 60
actacgtgca ctccaactac ttcactctga cgccggaaca aattgacgca gcggttcgac 120
tgaccaatac ggtcgggtccc acgatgacct agtactacat cattcgacg gagaacctgc 180
cgctgctaga gccactgca tcggtgccga tcgtggggaa cccactggcg aacctgggtc 240
aaccaaactt gaaggtgatt gttaacctgg gctacgcgac ccggcctatg gttattcgac 300
ctcgccgccc aatgttgcca ctccgttcgg ttgttcaga angtcagccc g 351
```

<210> 339

<211> 152

<212> DNA

<213> Mycobacterium tuberculosis

<400> 339

```
gcaccgatgt cggcgagcac ttcgtcaact tccaggggtg cccgcaccaa gtatttcgac 60
gagtatttcc gtcgggcccgc cgccgcccgt gcgcggcagg tggatcatct ggcggcgggg 120
ctgggactcg cgcgcgtacc ggctgcctcg gc 152
```

<210> 340

<211> 263

<212> DNA

<213> Mycobacterium tuberculosis

<400> 340

```
tgcacccaac ttactgagca tgctaacgct ggtcgtgcgg gtcttggtcc cgcgtgtcgg 60
cagggcacac gctcggggcg tagctgggag agggcccggt caagcccga gagcagtgtc 120
cagtcgcgca gcttgaccga ctttcgatga gaacgcgctt ctcgccgtat tgaactggcg 180
tgctgacggt cgctgagcag cgctcgccga gtgcggccgc tgattctttc atcgagccag 240
gacgcgcatt cgtgttcggc cgc
```

<210> 341

<211> 249

<212> DNA

<213> Mycobacterium tuberculosis

<400> 341

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agcttacggc cggctcgacgc gacgagtggc tcatgacacc acaaaccgtc aacgcctact 60
acaacccggg gatgaacgaa atcgtcttcc cgcagcgatt ttacagccac catttttcga 120
tccgcaggcc gacgaggccg ccaactacgg cgggatcggg gcgcgtgatc gggcacgatg 180
atcgggcacg gtttcgacga tagggcgcca aatacgangg cgacgcaatc tggtnattg 240
gtggatcga
```

<210> 342

<211> 269

<212> DNA

<213> Mycobacterium tuberculosis

<400> 342

```
atgtcgtcac gtcaccacaa tcgcgaggac ccaatcatgc cgcccagggc ggccaaccca 60
atggtggccg cgaagcggca gctcgatcgc agcgcggagg tgccggccgc cagttgattc 120
acgaacaggg tgaggtcata ggccgggcagg atagtgcga acgcaagacc tatactctgc 180
gtcggagtaa gaatcgagta gccgggtcgac caacggaagc gaaagtgtcc gcgatgttga 240
tgagcgtcgc cggttgtggc ggcgggtggc
```

<210> 343

<211> 336

<212> DNA

<213> Mycobacterium tuberculosis

<400> 343

```
agcttcacca gcgtgccgat gctgttcgcn acacctccct actatgcgca attcgccgac 60
acgggtggca tcaacacggg cgataagggtg gacatcgctg ggggtgaacgt cgggctggtg 120
cgctcgctgg caatccgcgg caaccgcgtg ttgatcggat tctcgttgcc cggcaagaca 180
atcgggatgc aaagccgggc agcaattcgc accgacacca ttcttgggcg taagaacctg 240
gaaatcgaac ccgcgggttc ggagccgttg aaacccaacg gtttcttgcc gttggcgtag 300
aacactacgc cataccaaat ctatgacgcy ttcgtc
```

<210> 344

<211> 417

<212> DNA

<213> Mycobacterium tuberculosis

<400> 344

```
ctgccgcggt ggcgggtcagc gcctggcaag tcaccgcacc gccgtccggt tcacgggcag 60
```

```

gctccccga aaagggccct ggcaacagaa ggtgatcaat gagctccgc agaccttcgc 120
cgatctggga cgcacatacg tgaagttcgg ccagatcatc gcgtccagcc cgggagcatt 180
cggtgagtcg ctgtcgcggg gaattccgcg gcctgctcga ccgggtgccg cccgcaaaaa 240
ccgacgaggt gcacaagctc ttgcgtcagg aactcggcga cgagccggcc cggctgttcg 300
cctccttcga ggaagaaccg ttgcgtctcg cgtccatcgc ccaagtgcac tacgcgacct 360
gcgcagcggc gaagaagtgt ggtcaagatc cacggccggg catccgccgc cgcgttt 417

```

<210> 345

<211> 405

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 345

```

gatcgtgccg gccccccggc ggcaagtagca gatcagctcg tcgaaatcgc ggcaaccagt 60
ccagtcgatt tccatacggg cgccgtcaat caactctgcg aacatcgcga tcggcaccgg 120
aaaccggcga gccgcgtcag ccagcgcgaac cagcaccggg atcggtatgaa tcatcaatat 180
tatcaagtga tttcctgatg gcatcgagct cgggtgatctt ggtctcgggg gccagctcgc 240
cgtcggcgac gtcgtcgatc cggcggccga gcgcatagac cgcaaatagt gccgctcgct 300
tttcgcgcgg caagagtcgg atgccgtaat atangtttct ggcgggcgtg cgcgtgaten 360
actcgggtgat tcgatacgcg tgttcattct ggtcatgcg tcctc 405

```

<210> 346

<211> 414

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 346

```

ggtggcgcaa tgaccgaaac cccccagcc ccgcaaacc cggcgggccc ggccggggccc 60
gcacaatcgt tcgtgttgga gcgggccatc cagaccgttg ggcgccgtaa ggaggccgtg 120
gtacgagtcg ggctggtgcc cggcaccggc aagttcgacc tcaacggccg cagcttgag 180
gactacttcc caaacaaggt gcaccagcag ttgatcaagg caccctggg caccgtggat 240
cgggtgtaaa gtttcgacat ctttgccac ctggggcgcg gcggcccgtc gggtcattggc 300
cggcgcgctg cgctgggta tcgcccgggc attgattctn gtatcgccg atgaccggcc 360
cgcgtgaat aangccggct tcttgaccgt gatccacgcy ccaccgaac caaa 414

```

<210> 347

<211> 331

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 347

```

cacaatagat tactcaagct tcgaaccage ggccattatca cgtatccccg ctgagacctt 60
gacccttagg gccgaagtga cttcgctgct gctatgccga caccgattt ccagacgctg 120
ctgttacacg acggccgggc cgggtggccac catcacgctc aaccgcccgg aacagctcaa 180
caccatcgtc ccgccatgc ccgacgagat cgaggccgct atcgggttg ccgagcgcg 240
ccaggacatc aaggtcatcg tgctgcgcgg tgccggccgc gccttctccg gcggttacia 300
cttcggcggc gggttccaac attgggggca t 331

```

<210> 348

<211> 386

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 348
t c a g g a c g c t t a t g g t t g g c a g a t g g t c g c c c t g g c g t c g a a t a c g c g c g a g c g c a t g a g 60
c t c a c c g g t t c g g a a c a a c g t a t c g a a g a a c g t c g c a c t g c t g g c a g a t g g t a t c t c c g a 120
t g t g g t t g t a a t t t g t a t c c c a a c t c t a a c t g t g c t a t c g g a t c a g c g t g a a t a t c g a g a 180
t a t t g c g a a t g c g a t g a c a g g c c g c c a t t c g g t t t a t t c g c t t a c g c t t c c c g g g t t c g a 240
t t c g t c t g a t g c a c t g c c g c a a a a c g c g g a t a t g a t t g t t g a a a c c g t a t c t a a c g c a a t 300
t a t t g a t g t g g t a g g c g g c a g c t g c c g t t t t g t g c t g t c g g g c t a t t c a t c g g g t g g g g g 360
t g t t t g g c t a t g c c c t c t g c t c c c a t 386

<210> 349
<211> 187
<212> DNA
<213> Mycobacterium tuberculosis

<400> 349
c g c a g c t g t c g c c g a t c t g g t c c g g a a t a c c t a g c t c c a g g t t c t g a g t g g a g a t g a g t g 60
c g g c c a t c g a a g t g t t g t c a a t g t a c t c c a g g a t g t c a g g t g c c a g g c c g c t g g c g a g g a 120
t c t t g g g c a c c g c c g c c a t g a c t t g g t c g a a g t c g g c g a a c g g g g c g a g c a c g c t g g c g t 180
c g t g g t c 187

<210> 350
<211> 241
<212> DNA
<213> Mycobacterium tuberculosis

<400> 350
g t a g t t c g t t c a t c c a a a c a c a g t g c g g t a c c g g c t c a a g c g g a t c a c c g a c t t c a c c g g 60
g c g c g a t c c c a c c a g c c a c g c g a t g c c t a t g t c c t t c g g g t g g c g g c c a c c g t g g g t c a 120
a c t c a a c t a t c c g a c g c c g c a c t g a a g c a t c g a c a g c a a t g c c g t g t c a t a g a t t c c c t c 180
g c c g g t c a g a g g g g g t c c a g c a g g g g c c c c g g a a a g a t a c c a g g g g c g c c g t c g g a c c g 240
a 241

<210> 351
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 351
t c c g c t c g c t t c t c c g a g a g g t t g a g t g c c a a c g c t c t g c c g a t g c c c g a a g c c g g c c c c 60
g g t g a t g a c g g c g a c c t t g c c t t c g a a t g a g c t c a t t t g a c t a c t c c c c g t g g t t g t c c c 120
t g c g a t t g g t g g a g g t g g c c g c g c a g c e t t g c c c c g a g g t c g g c g a t c g c g t c t c g g g c t 180
t c g g g g a g c a g a c t g a c c t g c a g a t g g a a g t c g t g c c a c a t g c c c g c g a a c c g g c g a t g c 240
t c g a t g c t t g t t t t c g a a g c g g c g c a g g c g g t t t c g a t c t t g t c c g c g t c a a c a c n g a t c 300
g g a t c g t c g c c c g c g g t c t g c a t g a c g a a t g g g c g 335

<210> 352
<211> 441
<212> DNA
<213> Mycobacterium tuberculosis

<400> 352
a t g g g a g g c c a c c g a t t a c c a t c t t g c a c a c a c c g a t t c c g g g c t a t t g a t g t c c a c g t t 60
c g g t c c g c g a a c c g c g c t g t g g c t g c t g c t g g c c a a a g g c g g a g g c g a t a c c g a a g t c a g 120

tgcccaagct	tgggttccac	gctcgcgcag	ccacgccgtc	acctttccac	gagacctcac	180
ctgccgatcc	gaaatggaat	cggccgtgac	ggaattggcg	cagcgaacac	tcaacgaggt	240
ggtggcttcg	tcgcgaaccg	tcacccgagt	cgcggtcacc	gtgcgcacgg	cgacgttcta	300
caccgcgacc	aagatccgaa	agctgcaagc	tcccagcacc	gatcccgcg	tcatcaccgc	360
tgccgcccgg	cacgttcttg	aacctattcg	agctggaatc	ggccgtccgg	ttgctgggaa	420
ttgcngttaa	gaactgggcc	t				441

<210> 353

<211> 332

<212> DNA

<213> Mycobacterium tuberculosis

<400> 353

gctttgcgcg	cttctccgag	aggttggagt	gccaacgcgc	tgccgatgcc	cgagccggcc	60
ccggtgatga	cggcgacctt	gccttcgaat	gagctcattt	gactactccc	cgtggttgtc	120
cctgcgattg	gtggaggtgg	ccgcgcagcc	ttgccccgag	gtcggcgatc	gcgtcgcggg	180
cttcggggag	caaaactgacc	tgcagatgga	agtcgtgcca	catgcccgcg	aaccggcgat	240
gctcgatgct	tgttttcgaa	gcggcgcagg	cggttcgatc	ttgtccgcgt	caacgcagat	300
cggatcgtcg	cccgcgggtc	tgcatgaaga	at			332

<210> 354

<211> 334

<212> DNA

<213> Mycobacterium tuberculosis

<400> 354

ctcacgcagc	cacgccgtca	cctttccacg	aagacctcac	ctgccgatcc	gaaatggaat	60
cggccgtgac	ggaaattggc	gcagcgaaac	actcaacgag	gtggtggctt	cgtcgcgaac	120
cgtcacccga	gtcgcgggtca	ccgtgcgcac	ggcgacgttc	tacaccgcga	ccaacatccg	180
aaagctgcaa	gctcccagca	ccgatcccga	cgtcatcacc	gctgccgccc	ggcacgttct	240
tgacctattc	gagctggatc	ggcccgtccg	gttgctggga	gtgcgggttag	aaactggcct	300
agaaaccggc	gggcacaccg	cacctgggcg	gggn			334

<210> 355

<211> 341

<212> DNA

<213> Mycobacterium tuberculosis

<400> 355

tgcttccggc	tcgtatgttg	tgtggaattg	tgagcggata	acaatttcac	acaggaaaca	60
gctatgacca	tgattacgcc	aagctattta	ggtgacacta	tagaatactc	aagcttgatg	120
ccgccgaaac	cgagcgtgag	cacgccgcc	gccaccacnc	gcgggtcggg	cgccgggccc	180
gggtcgccan	gctgctccgc	tcggtgatgg	cacgccaccg	cgacaccacc	cggtgcgct	240
acgtcgagcc	ataccggggc	gagctacatc	ggctcggccg	cccagtgttc	gggccctctt	300
tcgaagtcga	agtcgatacc	gattgcgcgt	ccgncgccgc	a		341

<210> 356

<211> 259

<212> DNA

<213> Mycobacterium tuberculosis

<400> 356

caggcatgca	agcttcacgt	ccgtacggct	cgggtacgct	tcggtcgcag	tgtgcgagtg	60
------------	------------	------------	------------	------------	------------	----

atagatgacg	accgggacct	cgtctgcac	ttccatagcc	cgccacacct	tcagttgctc	120
accggaatcc	aaccggtaga	aggtcggcga	gcgctcggca	ttggatcatc	ggatattgcc	180
ctcgggacgg	tcagaaccct	cggttcggc	cagcactccg	caggcttcgt	cggggtgggc	240
gcgacgcgca	tgggccacc					259

<210> 357
 <211> 349
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 357						
gcttgtctat	cgtcccggcc	aggtcggcc	agtcaaggtc	gaaggccagt	ccggtctcct	60
ctccgactac	ggccaagaac	tgggcgacgg	tgtcagtgc	gaccagcgg	aactggtggc	120
gccctaggcg	agcgaccgcc	tcacaaacgg	cggtgaccgc	gttctggtcg	tgcaccatcg	180
agccgtgccc	agcccgccg	cgtgccgtca	gccgcatcca	ctggatgccc	ttctcggcgg	240
tttcaatcag	gtacaggcga	cgttcgccac	catcgtgccg	gggcacgggt	agcgagaaac	300
cgccgacttc	acgattgcct	cggtgatgcc	gtcgaaacag	atcgggcct		349

<210> 358
 <211> 325
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 358						
gcgcgccatg	ttgaggttgt	ccgacgggtga	cgacgggtgaa	ccacaactgt	ttgacctgtc	60
cgcacacacc	gtgtggatcg	gcgagcggac	ccgacaaatc	gatggcgcg	acatcgcggt	120
tgcccagggtg	attgctaate	cggtcgggggt	caagttgggc	cccaacatga	ccccggaact	180
ggccgtggag	tacgtcgagc	ggctcgaccc	gcacaataag	ccgggccggc	tgacttggtg	240
agcaggatgg	gcaaccacaa	ggtccgcgat	ctgttgccac	cgatcgtgga	gaacgtccat	300
gccaccgggc	atcaggtcat	ctggc				325

<210> 359
 <211> 191
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 359						
ttgccttcca	tgccgagcaa	ggctgactca	gcgatgacga	attgttcttc	ttcgcggggtg	60
ttgctgctgg	ttgcgggcta	tgagagcact	gctcatatga	ttagcacatt	gtttctgacg	120
ctggccgact	atccagatca	gctgacactc	cttgccgagc	aaccagacct	gatcccgcgg	180
gcgatcgagg	a					191

<210> 360
 <211> 74
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 360						
cgacgtgagg	cccaactgcg	accaccaggt	cctgggtatgg	caggacatgg	ccgggttcag	60
cggcgccaat	accg					74

<210> 361

<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 361
taacgactcg ggtccagcga ccgcgcgaac acnaacggcc ggacnacgtg ggccaggggc 60
gcggcctccc ctacaaacag gatccggtgc ctgcgaacga caggctccgg tgcggcggtg 120
ggcgccgtgc tcgtcccagc gtccgggtccc gggtcgcccg cgacgcttgt ttctccata 180
ctcgccccct aatctcgagg cagcccgtac ccgcaggcaa cctcccaaaa atgcaatccc 240
ccaaaatgca atgcgtcnag ctattttctca caccgaccgc tagttgcgga tcanaaatcc 300
gttgggcgcg ga 312

<210> 362
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 362
cntggcggtg ggtgcggtgt cgaacacgac cacacttctt tgcgggttcgg tgatctcgac 60
accggccgcg agccgaccac catgcgcgcg tagatcggcg atcagcgcgt cggctatcgc 120
ctgggtgccg cccaccggaa tcggccagcc gaccgaatgg gccagcgttg ccatcatcag 180
tccggcgccg gccgacacca gtgacggcaa cggtgaaatc ncgtgggcgg caacgccggt 240
gaacaacgcg cgggcatcct cgcccgccag cgaccgccag gcaggggtgc cctgggccag 300
catccgcagc ccgagacnca ggaccgancc cagtg 335

<210> 363
<211> 386
<212> DNA
<213> Mycobacterium tuberculosis

<400> 363
gcttttcnga tcgcagcgag tcgtaccgcg gccggtcacc ttctgtggata tcgccggcct 60
ggtcaagggg gcgtccgagg gagccgggct gggtaacaag ttcttggtc ataccgcga 120
atgnacgcc atttgtcagg tggcggggt gttcgtcaac aacnacttga ctcatgtcac 180
cggacgggtc gatcccant ccgacattga ggtcgtcgan accgagctga tcctggcana 240
tctgcaaacc ctggagcggg ccacggggcg gctggagaag gaancgcgca ccaacaaggc 300
gcgcaagccg gtctacgacg cggcactgcg tgcccagcag gtgctcgacg ccggcaanac 360
gctgttcgcc gcgggggtgg atgccg 386

<210> 364
<211> 386
<212> DNA
<213> Mycobacterium tuberculosis

<400> 364
gtcgtacgcc attngtcggt gtgcgcatac cagtacgacg cgccggggcac ctgacgcggc 60
ggccgcgacc agtcggtggc catcgccatc gtctgccacc cggcgaacgg acgcaccttc 120
tcctggccga cgtagtgcgc ccaccggccg ccgttgcgtc ccatcnatcc ggtcaacatg 180
agcagcgcca acaccgagcg gtacatgaca tcgctgtgga accagtgaca gattccgccc 240
cccatgatga tcatcgaccg tcctccggat tcggtcgcgt tgcgggcgaa attccttggc 300
aaaccggatt gcctgcgcgg ccggcacacc ggtgatcgac tcctgccagg ccgggggtgtt 360
ctgctggggtt cggtcgtggt accggt 386

<210> 365
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 365
gcgaggcggg atcgcttccc gtcgtaccgg cgaccgccag ccgagaagct cgttttccca 60
gtgttgctgg ggattctcac gctgctgctg antgctgcc anaccgcttc cgcttcgggt 120
tacaacgagc cgcggggcta cgatcgtgcg acgctgaant tgggtgttctc catggacttg 180
gggatgtgcc tgaaccgggt cacctacnac tccaagctgg cgccgtctcg tccgcaggtc 240
gttgcttgcg atagccggga ggcccggatc cgcaatgacg gattccatgc caacgctccg 300
agttgcatgc ggatcgaata cnaattgatc accca 335

<210> 366
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 366
tgggtcttgc cggcgagccc agcgaagtcg ctagcgtggc cgtgtttctt ggcttcggat 60
ctatcctcgt tacatgaccg gcaccgtgtt ggacgtgact ggcggccggg tcatatgaca 120
ccgagatcat tgccacggta cggcaattcg tcaagaagga aatctttccc natgcaccgg 180
ccctcgaacg tggcaacagc taccgcgaag aaatcgtcga tcggctgggt gttattggct 240
tgctcggtcg ccggctgcaa gggatcgac accaccgagt tcattctcgg gcgtgccggc 300
gcattcgagc tggcggtgcg cgctgccag caccgtcata agtacttgan gatggtcaaa 360
cgtcggacga accgccacca cgtcgctgcc gaacgg 396

<210> 367
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 367
tagatgccc agcttgccnt tanagacctc gtcgaccaag cacggacgcg accgtcgaag 60
gtggcgaatc cgggcttggc gtcnaccgc gtaaggcaga ccagatggtt cgcggcacgg 120
tcaacctgcc acacggcact ggtaagactg cccgcgtcgc ggtattcgcg gttggtgaaa 180
aggccgatgc tgccgttgcc gcgggggcg atgttgcg gagtgacgat ctgatcgaga 240
ggattcaggg cggctggctg ga 262

<210> 368
<211> 303
<212> DNA
<213> Mycobacterium tuberculosis

<400> 368
tctccacggc gtggatcaag gtaccggccg ggatgttgcg caatggcagg ttgttgcccg 60
gcttgatgtc tgcgttagcg ccggattcca ccacatcccc ttgcgaaaag tccgttgggt 120
gcaatgatgt agcgcttctc cccatcgaga tagtgagca acgcaatccg tgcggtacgg 180
ttcgggtcgt actcgatgtg cgcgaccttg gcgttgacac catctttgtc attgcggcga 240
aagtcgatca tccggtaagc gcgcttatga ccgccgcctt tgtgccgggt nggtaatccg 300
gcc 303

<210> 369

<211> 367
<212> DNA
<213> Mycobacterium tuberculosis

<400> 369
gcccggttcg atcgggcatg tccgcagtcg tcgttacccg aggcgggtcgt ggccgcgcta 60
atcggcgctcg gcgccgacaa gatgtgggat atccgcaatc ggggcggtcat ccctgcgggc 120
gcgctcccc gcgtccgagc cttcgtcgac gcaatcgagg caagtcacga cgcggatgag 180
gggcagcagt gaattacagc gaggtcgagc tgttgagtcg cgctcatcaa ctgttcgccg 240
gaaacagtcg gcgaccgggg ttggatgcgg gcaccacacc ctacggggga tctgctgtct 300
cgggctgccg acctgaatgt nggtgcgggc ancgcggta tcnactcccg tggaacacag 360
ccggggc 367

<210> 370
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

<400> 370
ctcggcggtg atatcggtgt agccggcgcc ggtgaangtc ggctccttac gtccactcga 60
caacagctca tagcgatcca accagtangc aaccgccttc agcagtacaa ccgcgccggc 120
gaacactgcg agttgaacgc gagctgcctg ggtcagcatg cctctgccgg ttgtcagccg 180
aaggccgccg aacaggtaat gcgtcaacag gctcgctaga aacgccagaa ccacggccac 240
gaacagccag ttcagcaccg accggtagaa cggcagatcg aagacgaaaa aacccaatgt 300
catagccgaa ttcgggggtcc acgatgcaa aggtgcccc gtgtacaaca actgaacctt 360
caccca 366

<210> 371
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 371
tccggctcgt atgttgtgtg gaattgtgag cggataacaa tttcacacag gaaacagcta 60
tgaccatgat tacgccaagc tatttaggtg aactataga atactcaagc ttcacgtccg 120
tacggctcgg gtacgcttcg gtcgcagtg gcgagtata gatgacgacc gggacctcgt 180
cggcatcttc catagcccgc cacaccttca gttgctcacc ggaatccaac cggtagaagg 240
tcggcgagcg ctcggcattg gtcacgggga tatgccgctc gggacggta gagccctcgg 300
gtccggccag cactccgcag gcttcgctcg ggtggctcgg acgcgcatgg gccaccatcg 360
cattcaccag gtctgcgcga atcaccagca cgtagacggt tcctttccta agcaacaccg 420
aagtttcagg accgaatgct ccgggaaaca tgtca 455

<210> 372
<211> 196
<212> DNA
<213> Mycobacterium tuberculosis

<400> 372
caggcatgca agcttgatgc cgccgaaacc gagcgtgagc acgccgccag ccaccacgcc 60
cgggtcgggc gccggggccc ggccgccagg ctgctccgct cggatgatgg acgccaccgc 120
gacaccaccc ggctgcgcta cgtcgagcca taccggggcg agctccatcc gctcggccgc 180
cagtgtccgg gccctc 196

<210> 373
<211> 443
<212> DNA
<213> Mycobacterium tuberculosis

<400> 373
cctgcatccg gctcgtatgt tgtgtggaat tgtgancgga taacaatttc acacaggaaa 60
cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac tcaagcttcc 120
aatccccctg ccctgatacg cgtcggcaac cgtgaacgcg atctcggcga ccgtcggatc 180
ggtttcatcc cgcacaaaac gcgcgtcggc tacggggtcg cttccgtcgg tcaccacca 240
gacgaagtgg tcgacgtagt cgacttccga caggtagtgc atcaacgccg gactgggaac 300
acnagccgac atgaaccgtc gatacagcgt ctncccggag aactggatgt gtccgtgcac 360
ggtcgcgtcg cggtcaccgg gcagcacggg gcgtaacatc agttgagtcc cgtcggcaag 420
ccgtaccgga atcggggaga cga 443

<210> 374
<211> 445
<212> DNA
<213> Mycobacterium tuberculosis

<400> 374
caagatgacg gccggtgccg ccccgatccg tgcctcggtc agcgcgaacg tgctttccgg 60
tccggcgacc accatgtcgc acgcaccgac caggccgaac ccgccggccc gcacatgccc 120
gttgatggcg ccgaccaccg gcagcggcga ctcgacgatg gcgcgcaaca gcgccgtcat 180
ttcccgcgcc cgcgccaccg ccatccggta cggatcacca ccaccaccg cggcctcgct 240
gaggtccgcg ccggcgcgaga acgttccgcc ggtatgcccc agcacgacca gccgcaccgc 300
cggatctgct tcggccgcac tcagcccttg atgtagttgg ctgaccagcg tgctcgacag 360
cgcgttgccg ttgtgcggag agttcagtgt cagcctggcg aaggggccgc cgcaggcggc 420
cgggccagcg tagtcgacgg ggctg 445

<210> 375
<211> 308
<212> DNA
<213> Mycobacterium tuberculosis

<400> 375
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gtcggacctg ctggtagtgg ggatctaacg caacatggtc gggattcatc atggtgtacc 120
cgtgataccc attcgcagct gccggtgaaa ccccgcgatg ccgggatttc cagccgcact 180
aggatgtcta gccggccagc cgctgccgcc ggacttcggg atgttcggta taccaccgat 240
cggcaatctt gcntatccgc cgatgctcga acgctagcca ccccaaacca accactgtga 300
cnacaatc 308

<210> 376
<211> 239
<212> DNA
<213> Mycobacterium tuberculosis

<400> 376
tgaatttccc gateccacaa tctcggttca gatacaggtc gccatacccc ttacttcggc 60
aacgctgggc ggattggccc tgccgtgca gcagaaccatc gacgccatcg aattgcccgc 120
aatctcgttc agccaatcca taccatcga cattccgccg atcgacatcc cggcctccac 180
tatcaacgga atttcgatgt cggaggctgt gccgatcgat gtgtccgtcg acattccgg 239

<210> 377
<211> 431
<212> DNA
<213> Mycobacterium tuberculosis

<400> 377
tactcaagct tgaacgctgc gagcgagccc atgtagagcg tttggtacca aaccgatcgg 60
tgggccaact tgccatgggc tcacagcggc tatcgcgagc gtgtagccga tcatcggcc 120
ggcgacgggtg gcctgagcgg caggggttgc cttatccatc ctcttgccgc atggttgccg 180
cagggagtgc cggttaagtct ggtcggcaac ctggcccgtc gcgggttggg ttcggattcc 240
ctcggctagt aaggtgctcg cctggtgtta caacgaatcg ctacacagct cttatcgga 300
gtggccgtcg cgatcggtgc gctgccgctg gcgacgcgt tcggcnttac cgccaccgga 360
acgtcccaag gtgcgctcat cgggctctac ggcgccatct tcgccggatt cttcccngcc 420
gtgttcgggtg g 431

<210> 378
<211> 334
<212> DNA
<213> Mycobacterium tuberculosis

<400> 378
gcggtgtctg aacttcgccc gttccctcca ggcattgag cttcagccc accggcaggt 60
agggagtcgg catgcggtcc ttgcgccga ccccgctggc taaatagcca ccccgagcg 120
cggtcacggt ctttgacccg ggacgacggc ataccggcag cgcgaaatc gccgcgggct 180
gcagcgtgaa cgtcgaatac gagtcgaaca gtgtcggcgc gtaaaaacc gagccggcgg 240
tcgcttcggt aatcaacggc tcctgcgcaa ccagctgcaa ntncgggtg ccaccggcgt 300
tgacaatctt gatntcggcg acctcgcgca ccan 334

<210> 379
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 379
tactcagctt cggctcaggt ggtgctgctg gtaaagttn ctgaacgggtg caggtttcga 60
caatgtgggt cgggttcggc gggtagtgc atcgagacac tggcgaggc tatcgaccc 120
gttatcggt acaaacaat cgcggtatgc gttcttgagc atgagtcggc gaccgtcgtc 180
atggtcgaca cccacgacgg aaagacgcag atcgccgtca agcntgtgtg ccgcggatta 240
tcaggactga cctcctgggt gaccggcntg tttggtcncg atgcctggcg cccggccggc 300
gt 302

<210> 380
<211> 240
<212> DNA
<213> Mycobacterium tuberculosis

<400> 380
catcacctgg ttcataaaac tggaagcagc gcagcgcttc cttttcgcc gcaacatgag 60
ccagcctctc gtcggcggtc gggtagcagg gctcgggcag ctcgccgcg acagccgcct 120
gaccctgaaa ccagcttcca tatcccgca cgaacgacgc cagtccgcta cgtaaccct 180
ccgcgactgt ccatggacaa cancgcttc tccaccgacc gggcccggt gtggggtgtt 240

<210> 381
<211> 362
<212> DNA
<213> Mycobacterium tuberculosis

<400> 381
ctcaagcttc cggcgggcca gtaccgaaag cggaacagc tcgcggcagc ccacaacntg 60
ctgcgtcgga ttgccggcgg cganatcaat tccaggcagc tcccggacaa tgcggctctg 120
ctggcccgcga acgaaggact cgaggtcacc ccggtgcccg gggtcgtggt gcacctgccg 180
atcgcacagg ttggcccaca accggccgct tgatgcccgg tcggcaagcc cggcagttgc 240
caaaccagc gtgatcaggc tcggctcgcg agttcggcga agaagtggct cgcctgatca 300
cctaccatcg gccaggatct gcgtgtcatc acnacgctcg ccaaggaggt tgttgtggtg 360
ct 362

<210> 382
<211> 411
<212> DNA
<213> Mycobacterium tuberculosis

<400> 382
gccacgtttc gcgccgcccg gcatacggcg gcgtaccgat ctccgcgtca tacacccgcg 60
ggtaatcgcc gacggtgccg gttcgcgagc cgaagggtgac gacgctgatt gaatcgagtt 120
ccagggtccag cgggtggcgc agcaacggcg cgagctcaac gacgtcaatc acgttgtcgc 180
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ccgccaccac cgcgacaccg tcttgacgc ggacgccacc cccggatcgg ttgttgggca 300
aggtaattgg gtcattccat ttgacgggac gccgaccccg cagccccagt accgcccacg 360
accacgccg ctgacccac cactgtacga acaccaaggc gacgccgacc a 411

<210> 383
<211> 331
<212> DNA
<213> Mycobacterium tuberculosis

<400> 383
ctcaagcttg atgccgcta aaccgaagcg tgagcacgcc gccaccacc acgcgcgggt 60
cgggcgcggg gcccgggcgg ccaggctgct ccgctcggtg atggcacgcc accgcgacac 120
caccgggctg cgctacgtca agccataccg ggcgagcta catcggtcgc gccgccagt 180
gttcggggcc tctttcgagg tcnaggtcna taccgatttg cgcattccga gccgcaccct 240
ggacgacaga accgtgccct acgagtgcct gtcgggcggg gccaaagaac ancttggcat 300
cctggcgcgga ttggccggcg cggtcctggt c 331

<210> 384
<211> 254
<212> DNA
<213> Mycobacterium tuberculosis

<400> 384
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tcttccatag cccgccacac cttcagttgc tcaccggaat ccaaccggtg naangtcggc 120
gagcgctcgg cattggtcat cgggatatgc cgctcgggac ggtcagagcc ctcggtccg 180
gccagcactc cgcaggcttc gtcggggtgg tcgcgacncg catggggcac catcgcatc 240
accaggtctg cgcg 254

<210> 385
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 385
ctcaagcttc aattcctcca cgacgcgttc ccaaataaat ttcccgatcc cacaatctcg 60
gttcagatac aggtcgccat accccttact tcggcaacgc tgggcggatt ggccctgccg 120
ctgcagcaaa ccatcgacgc catcgaattg cgggcaatct cgttcagcca atccataccc 180
atcgacattc cgccgatcga catcccggcc tccactatca acggaatttc gatgtcggag 240
gtcgtgccga tcgatntntc cgtcnacatt cggnggtca ccatcaccgg caccagnatc 300
gacccgattc cgctgaactt cgacgttctc agcagcgccg gaacca 346

<210> 386
<211> 287
<212> DNA
<213> Mycobacterium tuberculosis

<400> 386
ttaacccccg tggcctctac gccgcctncg ggtcgaacat gcatcccgag canatgctcg 60
agcgcgcacc cactcgccg atggccggaa cgggctggtt acccggtgg cggtgacgt 120
tcggcggcga ggacatcggc tgggaagggg cgcttgccac cgtcgtcgaa gaccagatt 180
cgaaggtgtt cgtcgtgctc tacgacatga ccccgcgga cgagaagaac cttgaccggt 240
gggaaggctc cgagttcggc atccaccana agatccgatg ccgcgtt 287

<210> 387
<211> 370
<212> DNA
<213> Mycobacterium tuberculosis

<400> 387
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ttatcgtggg tacgctcgtg ctttccatgg gcgcctcttt cgggctttcc gtattggtct 120
ggcaggacat tctgggtatc gagttgtact ggatggtgtt ggcatgtcg gtgatcctgc 180
tcttgccggt gggatccgac tacaatctgc tgctgatttc ccggttgaaa aangaaattg 240
gggcccggatt gaacaccgga attatccgtg ccatggctgg taccggggga gtggtgacgg 300
ctgccggcat ggtgttcgcc gttaccatgt cgttgtttgt gttcagcgat ttgcgaatta 360
ttggtcagat 370

<210> 388
<211> 330
<212> DNA
<213> Mycobacterium tuberculosis

<400> 388
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cgacgtcgtc cgccggacac acctcgatgc tgccgccatg gacgcggtcg aacgcaagca 120
gtgatcagag ctacaacgcc gcgcggaacg cttccgccnc nggcgttacc gcatcccggt 180
gaccgggagg atcgcggtga tcgtcgatga cggcatcgcc accggagcga cggccaaggc 240
ggcgtgccag gtcgcccggg cgcacggtgc ggacaagggt gtgctggcgg tcccgatcgg 300
cccanacgac atcgtggcga gattcgccgg 330

<210> 389

<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 389
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atacgacggc gtcgcccact ttccgcggta cccgctcaac tttgtgtcna ccctcaacgc 120
cattgccggc acctactacg tgcactccaa ctacttcacg ctgacgccgg aacaaattga 180
cncagcgggt ccnctgacca atacggtcgg tcccacgatg acccantact acntcattcg 240
cacgganaac ctgccgctgc tagagccact gcgatcgggt ccgatcgtgg ggaaccact 300
ggcgaacctg gttcaaccaa acttgaaggt gattgttaac ctgggg 346

<210> 390
<211> 355
<212> DNA
<213> Mycobacterium tuberculosis

<400> 390
tcgctcaagc gcntgaggcc gaancggctg gttacgactc cctgtttgtg atggaccact 60
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ttggtgcgct ggccacggcg accgagcggc tgcaactggg cgcgttggtg accggcaata 180
cctaccgcag cccgaccctg ctggcaaaga tcatcaccac gtcgcacgtg gttagcgccg 240
gtcgcagcat cctcggcatt ggagccggtt ggtttgagct ggaacaccgc cagctcggct 300
tcgagttcgg cactttcagt gaccggttca accggctcga aaaggcgcta canat 355

<210> 391
<211> 403
<212> DNA
<213> Mycobacterium tuberculosis

<400> 391
atactcaagc ttccgctggg gcctgttcaa ccatggcgat cccgttggtc ccggacatcc 60
cgaacgagga caccgcgacc cncttcgggt tgtgatcatt accgttgggc cactgcgtaa 120
ccgcttgccg cacaaagagc ccggtctcga cgtcggaag ctcatcgggc acccgattga 180
aatgcagcag cggcggcacc acccgtgccc gcagtgcagc aattgccttg atcagcccga 240
cgggtccccg cgatgccgtg ctgtgccccg tgttgctctt ggccgatcca agcgcgcagg 300
gggtgccccg gccatacacc cgcgccaggc tgcggtactc aatcggttcg ccgattggcg 360
taccggtgcc gtgcgcctcc accacaccga ccgtttcggg ctg 403

<210> 392
<211> 440
<212> DNA
<213> Mycobacterium tuberculosis

<400> 392
caacagcgtt ccagcggcat accaccgcac atgccgtgca cccggcgccg ggccggagtcg 60
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ggccggcgat cgcgcgccag gtcgagttgg cgccgaccgt gatntcaccg ccgacgtagt 180
tggcgttgtg gtccgccatc cgcgcggcgg gcacggcgcg ggccgccacc acgatgtcac 240
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ccgacngcac gtgggcataat gtccanaacg gacngggccg gtttctcga tgcngccggg 360
gtccgcgaen tgcggacnen cngncacacc atccgccagt ccgcgtggcg tcccgcgcg 420
actctgcctc ggccgcgcca 440

<210> 393
<211> 353
<212> DNA
<213> Mycobacterium tuberculosis

<400> 393
ctcaagcttt gncgacgac gggcgatgtc gatganagga aaccccgagc cacaaccgac 60
nattttggcg tagccggcgg acntctgctc gattccgac acgtcggcgc tcgcatcgag 120
catggcgccg gcgacggcta gcagcgatcc gccgtcgtcg aggaacacga cagagccgt 180
acgcccggcc gtaagccgcg cccaggattc ggcgaaaaac cgttctacgt ggcgggtgta 240
ctgggtgtcc aatgattcgt ggggtgcgta ggcgtcgtcg caatcgtcga cataaatgcc 300
gtcggcccg c atcggtcaa caactcccgg gtgagtggaa tancacttgc cga 353

<210> 394
<211> 340
<212> DNA
<213> Mycobacterium tuberculosis

<400> 394
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aattcggcaa aatcggttaag agcctgaaga attcggtatc gccggacgaa atctgcgacg 120
catacggggc agatacgctt cgggttttac agatgtcgat ggggccgctg gaggttcac 180
gtccatgggc cacaaggat gttgtcggcg cgtaccgttt tctgcagcgg gtgtggcgct 240
tggtcgtcga cgagcacacc ggcgaaactc ggggtggctga cggcgtggaa ctcgacatcg 300
atacgctacg ggcgttgac cgcaccatcg tcggcgtgtc 340

<210> 395
<211> 362
<212> DNA
<213> Mycobacterium tuberculosis

<400> 395
ctcgtccttg actacgcca gtatcgaaan cctcctgtgc cggtncgcta aacacccggc 60
ggacactcan acggtgctgg tggcgcgga tggcaccgcg ggcagcaaag cgcacttctc 120
cggggacgac agcaagcgac cgctagacaa gaggggtcgt gcgcaggcag aagcgttggt 180
accacagctg ctggcgcttc gcgccaccga tgtttatgcc gccgaccggg tgcgctgcca 240
ccanacnatg gagccactcg ccgcggaact gaacgtgacc atacacaacg agccnccct 300
gaccgaagag tcctacgcca acaaccccaa acgcggccga caccgagtgc tgcagatctt 360
cg 362

<210> 396
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 396
gtatcgcttc cncctttggc caccagcagc cacagcgcgg ttcgcggaac gaacgtggac 60
atcaatagcc cggaatcggg gtgtgcaagt tggtaaaccg tgttgatccc aagctttgcc 120
agccttttcg tagtcttggg ccccaacccc cacagtgtt cgacggtagc gtcacccatg 180
atggccatcc agttggcatc ggtgagctga tagatgccag ctggtttcgc caacccggta 240
gcgatcttgg cgcgctgctt gttgtcactg atacctatcg agcaagacag cccggtttgc 300
gacaagatga cttttcggat ctcttcngcg aacttccaat ggggggtctcc gggant 356

<210> 397
<211> 350
<212> DNA
<213> Mycobacterium tuberculosis

<400> 397
ctcaagcttt tggctctagcc ggccgagcac gatacgggtg tccttgGCCa ccggcgggcg 60
ctgtccggga aatggcgggg ccccggtggt tttgctgang antgctgaac cgtagtcgaa 120
gtggcgggcg tcagactcca cccagccagc aggcagcgcg aagctgaatc ctccaaccgg 180
gttgtcgatc cggacagggt ggggtgCGtt tggggcaatg acaggTggcg gcggtgCGtt 240
cgggtcggcc ggcggagggt ctgcgttggg atcncCCggc tgggcattcg gcntnttggc 300
ggcggccggt ggtggggggg caacangtgt cccggtgCGg gtggcgctgc 350

<210> 398
<211> 355
<212> DNA
<213> Mycobacterium tuberculosis

<400> 398
atctgtaccc gaccaagatc tacaccatcg aatacgacgg cgTcgccgac tttccgCGgt 60
accCGtcaa ctttgtgtcg accctcaacg ccattgCCgg cacctactac gtgcactcca 120
actacttcat cctgacgCCg gaacaaattg acgcagCGgt tccgctgacc aatacggTcg 180
gtcccacgat gaccCagTac tacatcattc gcacggagaa cctgCCgctg ctagagccac 240
tgcgatCGgt gccgatCGtg gggaaccCac tggcgaacCt ggttcaacca aacttgaagg 300
tgattgttaa cctgggctac ggcgaccCGg cctatggtta ttcgacctcg ccgcc 355

<210> 399
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 399
ctcaagcttg caatgcgggt cgggatgccc atggttgGaa natggTcgcc ctggcgTcna 60
atacgCGcga gcgcatgagc tcaccggttc ggaacaacgt atcgaaaaac gtcgcactgc 120
tggcagatgg tatctccgat gtggttgTaa tttgtatccc aactctaact gtgctatCGg 180
atcagCGtga atatcganat attgcgaatg cgatgacagg ccgccattcg gtttattCGc 240
ttacgcttcc cgggttcgat tcgtctgatg cactgCCgca aaacgCGgat atgattgttg 300
aaaccgtatc taacgcaatt attgatgtgg taggcggcag ctgccgtttt gtgctgtCGg 360

<210> 400
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 400
caaatacacg ccggacgcac aggcggacat cgccatcccg agcacaccca aaacgggata 60
caggatggag gccaacGCCa cggccgCGcc caggatcacc aaccacaccg gcttggtcag 120
cttgtcggcg gcggtatagg catcgggCCg ctgcaacgca gcatgcacaa acgCGtacac 180
cgctgtcacc aagacggCGa ccagcaatac cagcatgacg gtaccCacga ggtggctcac 240
gcattcagac tatgcggttt gcatccaaca cg 272

<210> 401

<211> 306
<212> DNA
<213> Mycobacterium tuberculosis

<400> 401
ctcgtccttc ggcctcgctg caggagtggg agccgcaggg ctggaaatcc gaaaaacgag 60
ccggtgatcg cactgtcgcc gatcggcgcc gcacctggtt ggtgttacgg atgaatccgc 120
agegaaatgt ggctgcgggtg gcgtgtcgctg actcgttggc gtcgacgctg gtggcagcca 180
ccgagcgggtt ggtccaggat ctggatgggc aaagtgtgtc ggcccggccg gtgacggccg 240
atgagctgac cgaggtcgac agcgccgtgt tggctgactt ggaaccgaca tggagtcgcc 300
ccggtt 306

<210> 402
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

<400> 402
gtctagnccg ccgaacacga tacgggtgtc attggccacc ggcgggcggt gtccgggaaa 60
tggcggttcc ccggtggttt tgctgaagan tgctgaaccg tagtcgaagt gggcggcgtc 120
agactccacc cagccagcag gcagcgcgaa gctgaatcct ccaaccgggt tgtcgatccg 180
gacaggttgg ggtgcgtttg gggcaatgac aggtggcggc ggtgcgttcg ggtcggcccg 240
cggaagtgtc gcgttgggat cgcccggctg ggcattcggc gtgttggcgg cggccggtgg 300

<210> 403
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 403
actcaagctt gagattggcg tcaacgggtg tcggcaccgg cgtcctgcag ttggtaggcc 60
tgagttttgt gcatcaggcc gatgccgagg ccctcgtagc cacgcatgta cancaccacg 120
ccgcgccccct cacgggagac catcgccagc gcggcgtcca gctgaggccc gcaatcgag 180
cggcgtgacc caaacacatc gccggtcaag cactccgaat gcaccggac cagcacgtcg 240
tcaccgtcgg cgttggggccc ggcgatctcg ccgcggacca gcgcgacatg ttccacgtcc 300
tcgtaaatgc tgggtgtancc gatggcgaga aactcccat gacaantcgg aatcccgcgc 360
ctcggcgacc ccgctcaatg ttgcttctcn tgcttg 396

<210> 404
<211> 352
<212> DNA
<213> Mycobacterium tuberculosis

<400> 404
tcgacnagca ttcttgaeng ttgttttggc tcggcatggt tagccaaggt tctgcgggtcc 60
caccagatca tcttggtccg gtagecgtcg tccgggtatg ctgccgcggg gattctcgtc 120
gctattactc cccccgaaga acgccaccgg tccagcgctg gggccgcccg ggtcccatc 180
acaaactgaa cccccaaagc gggacatgct tagcggtagg gcgcgcgcca aggcggcagc 240
aatcgcatca ctgcgtgcg cgtcactatt aaccaccccg gacttcactt ccacgacccc 300
gaatggcgcc cgggtcattga tcatcttgcg caccgcggat aatccgggat tg 352

<210> 405
<211> 420

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 405

```
accggggcca ctccgcacaa tctgtacccg accaanatct acaccatcga atacgacggc 60
gtcgccgact ttccgcggta cccgctcaac tttgtgtcna ccctcaacgc cattgccggc 120
acctactacg tgcaactcaa ctacttcate ctgacgccgg aacaaattga cgcngcgggt 180
ccgctgacca atacggtcgg tcccacnatg acccantact acatcattcg cacgganaac 240
ctgccgctgc taaagccact gcgatcgggt ccgatcgtgg ggaaccact ggcgaacctg 300
gttcaaccaa acttgaaggt nattgttnac ctgggctacg gcganccggc cnttggttat 360
tccacctcnc cgcccaatgt ttgcnactcc cgttcggggg tggtcccnna aggtcaacco 420
```

<210> 406

<211> 328

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 406

```
cgctcaagcg cntgaggccg aancggctgg ttacgactcc ctgtttgtga tggaccactt 60
ctaccaactg cccatgttgg ggacgcccga ccagccgatg ctggaggcct acacggccct 120
tggtgcgctg gccacggcga ccgagcgggt gcaactgggc gcgttggtga ccggcaatac 180
ctaccgcagc ccgaccctgc tggcaaagat catcaccacg ctcgacgtgg ttagcgccgg 240
tcgagcgatc ctcggcattg gagccggttg gtttgantcg gaacaccgcc agctcggtt 300
cgagttcggc actttcagtg accggttc 328
```

<210> 407

<211> 315

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 407

```
ctcaagcttg cgttcgatga agtagtcgtc ggtcagcgcc gcctcttcga gctccttggc 60
gatgccagc aaggagtcac cgccgcccag cttggccagg atcttgctcg cctgttcctt 120
gacgatgcgg gccgcgggat cgtagttctt gtagacacga tgaccgaaac ccatcaattt 180
gaccccgccc tcgcggttct tgaccttgcg tacaaactcg ctgacgtcgt cgccgctgtc 240
gcgaatgcc tcgagcatct ccaggacagc ctgattggcg ccgccatgaa gcggaccca 300
tagtgcgttg atgcc 315
```

<210> 408

<211> 329

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 408

```
ggtcaggccg agcaggcgcg aggaacgacg aaccaacaa gccatggtgg ttggcgccgt 60
cgagaggtcg gcggtcgcca caacgggaag atcgccctga gcgtcgctcg accgccgcct 120
cgagttgggt cataacgaag tagctgatgc cgatcatgtc gacgtttccg tcgcatcagc 180
gtgcagcggc gaccactcn acgaggtctc ggtgccggcg cgccagggc accagcagt 240
acgagtccag gcgccgtcgg gccaaagcgt cgcggtgcca nccgtggtgg gtcgggcat 300
ggttgggtgt gctcatttcg ggaacgcca 329
```

<210> 409

<211> 294

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 409

```
ctcgaagctt taacagcatc aaccccgccc cgcaccagca ccgacacnat gtcgatgccca 60
tcgaggtgaa tgtcgaactg gcgcaaacca tcggcgaccg cgaccaccgg caacatgggt 120
accggcgatt tccggtgccca atgccgaccc gacggggcgc tctcaccgca ggtgacctcg 180
atcaccgaga ccancgggcc gttntntnca cgcacccta ccgtgtcacg cccaaaacgg 240
cgctggtggt cgattgccgg agtgcacccc ncaccagtg tcgtgcccg atcc 294
```

<210> 410

<211> 288

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 410

```
tgatgccgca cccgatcgac ggtcggttggc cgggggttgac tggccgcccg gcgaagcagg 60
gcgtcgaccg cggcccggaac gtcggcgggcc gtcaccggtc ggccattgcc cgggcggggag 120
tcgtcgagct gaccacggta gacaagtcgg cgctggccgt cgaagacnaa cgtgtcgggt 180
gtgcaggccg cggagaaggc gcgggcgacn tcttgggttt cgtcgtanag atacgggaac 240
gtccagccgt ggcggcgggc ctcggcgacc atctgatcgg gcccgtec 288
```

<210> 411

<211> 420

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 411

```
tttcgggcga ggcggtatan cttcccntcg taccggcgac cgccagccga naagctcggt 60
ttcccagtggt tgctggggat tctcacgctg ctgctgantg cgtgccaaac cgcttccgct 120
tcgggttaca acgagcccg cggtacnata cgtgcgacgc tgaagttggt gttctccatg 180
gacttgggga tgtgcctgaa ccggttcacc tacnactcca agctggcgcc gtctcgtccg 240
caggtcggtg cttgcgatag ccgggaggcc cggatccgca atgacggatt ccntgccanc 300
gctccgagtt gcntgcggat cgactacnaa ttgatcacc anaaccatcg ggcgtnttac 360
tgctgaagt acctggtgcg ggtcggatac tgctatccg cggtgacaac cccggcaagc 420
```

<210> 412

<211> 378

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 412

```
gttttggttc ggcattggtta gccaaagttc tgcggtccca ccagatcatc ttggtccggt 60
agcgctcgtc cgggtatgct gccgcgggga ttctcgctgc tattactccc cccgaagaac 120
gccaccggtc cagcgcggtg gccgcgcggg tccccatcac aaactgaacc cccaacaggg 180
acatgcttag cggtagggcg cgcgcgaagg cggcagcaat cgcactactg cgctgcgcgt 240
cactattaac ccaccgggac ttcacttcca cgaccccgaa tggcgcccgg tcattgatca 300
tcttgcgcac cgcggataat ccgggattgc cagcccattc nactaccgca tgcgagtcac 360
cggctgaccg cagcggtc
```

<210> 413

<211> 347

<212> DNA

<213> Mycobacterium tuberculosis

<400> 413

```
tgcgctagggc ggggtttcccc ttccgtccga gcngtcagaa gctcctatga caatgcacta 60
cccagacna tcaacggcct atgcaatacc nagctgatca aaccgggcaa gccctggcgg 120
tccatcgagg atgtcgagtt ggccaccgcg cgctgggtcg actggttcaa ccatcgccgc 180
ctctaccggt actgcggcga catcccgccg gtctaactcg acgccgcctc actacgctca 240
acgccagaga ccancggccg gctgacgtct cagatcagag agtctccgga ctcaccgggg 300
cggttcatcc ccactgtcga tagcgtctgt ggataacttt gtctgca 347
```

<210> 414

<211> 165

<212> DNA

<213> Mycobacterium tuberculosis

<400> 414

```
gcgcgtngaa ctgatagggt cggcccggtt cgagcangcc ggccatttgt tcgatgcggt 60
taccgaagat ctcttcgggt acctgcccgc cgccggccag ctcgggccag tgcccggcgt 120
tggccgcccgc ggcgacaatc ttggcgtcca cggtggtctg ggtca 165
```

<210> 415

<211> 317

<212> DNA

<213> Mycobacterium tuberculosis

<400> 415

```
ctcaagcttc aatacagagt tataaactgt gataatcaac cctcatcaat gatgacnaac 60
taacccccga tatcaggtca catgacgaag ggaaagagaa ggaaatcaac tgtgacaaac 120
tgccctcaaa tttggcttcc ttaaaaatta cagttcaaaa agtatgagaa aatccatgca 180
ggctgaagga aacagcaata actgtgacaa attaccctca gtaggtcaga acaaattgta 240
cgaaccaccc tcaaattctgt gacagataac cctcagacta tcctgtcgtc atggaagtga 300
tatcgcgga ggaaat 317
```

<210> 416

<211> 379

<212> DNA

<213> Mycobacterium tuberculosis

<400> 416

```
ctcaagcttc gatcgacatt actccgcct tgggtctggt ctccgagctg gtcgggtcatg 60
gtcggacctg ctggtagtgg ggatctaacg caacatggtc gggattcatc atggtgtacc 120
cgtgatacc attcgcagct gccggtgaaa cccgcgatg ccgggatttc cagccgcact 180
aggatgtcta gccggccagc cgctgccgcc ggacttcggg atgttcggta taccancgat 240
cggcaatctt gcgtatccgc cgatgctcga acgctancca cgccaaacca accactgtga 300
cnacaatcgc caccacacca aaggtcatgc cctcggcggt atgtccgggt ccgaaagccg 360
caagagctcc gacgccgcc 379
```

<210> 417

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<400> 417

```

cattcccaat tgaatttccc natcccacaa tctcggttca gatacaggtc gccatacccc 60
ttacttcggc aacgctgggc ggattggccc tgccgctgca gcanaccatc gacgccatcg 120
aattgcccgc aatctcgttc agccaatcca taccatcga cattccgccg atcgacatcc 180
cggcctccac tatcaacgga atttcgatgt cggagggtcgt gccgatcgat gtgtccgctc 240
acattccggc ggtcaccatc accggcacca ggatcgaccc gattccgctg aacttcgacg 300
ttctcagcag cgccggaccc atcaacatct cgatcatcga cattccggcg ctgccgggct 360
ttggcaactc gaccgagctg ccgtcgtcgg gcttcttcaa caccggcggc ggtggcggct 420

```

<210> 418
 <211> 255
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 418
ctcaagcttt cggcggagac ggacannttg cgaacattga tgacaaaata gaaatcattg 60
atggtttgag tcaccaggcc gatcaagcct tcgccgagcc aaattccaat caagaggccc 120
aagcccgtac caatcagccc ggcaacgagg gattccgtca ttatcagcca aaataactgc 180
tctcgggtta caccaaaaca gcgcaatatg gcgaaaaacg gtcgccgttg cacgacatta 240
aatgtcacgg tattg                                     255

```

<210> 419
 <211> 359
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 419
agcttaactg ctccctaata cctggggctg tgccctgcgggt gtatgcacgg catacggaca 60
tcntccctt gagaccnccg gtctaatacag ccacgtgtcc accatcaggg gtcaaccccg 120
gccaaagggc acggcacccc aagttcgccg accgttaacc tattgctgtg agcttcattt 180
gctgcgagca aaacagttgg tcggccgtta ggaactgaat tgacactcaa ccgatttggg 240
gccnccgtag gtgtcctggc tcgggggtgc ctggtgttgt ccgcgtgtgg taacgaccac 300
aatgtgaccg ggggaggtgc aaccactggc cacgcgtccg cgaatgtcta ttgcggggg 359

```

<210> 420
 <211> 314
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 420
ctcaagcttg ggggtggcgt gtcggtcggt gtgcttggcg gcgtcgggat caacaccgcc 60
cacgaaatgg ggcacaagaa ggattcgctg gagcggtggc tgtccaaaat caccctcgcc 120
cagacctgct acgggcactt ctacatcgag cacaaccgtg gccatcacgt ccgggtgtcc 180
acaccggagg acccggcgtc ggcgcggttc ggcgaaacgt tgtgggagtt cctgccccgc 240
agtgttatcg gcggccttgc ctcgccgctt catttgagg cccaacggct gcgtcggctc 300
ggcgtcagcc ccct                                     314

```

<210> 421
 <211> 280
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 421
gcaccaaggc cccacacgtc accctgtgac ctctcgcgcc gaccccgccc gaggtcctgg 60

```

```

ccgttaccac ctgaacgggc gagccgggag tctggtacgc atcgaacaaa gagcaagggtg 120
catgggcgga gttgttcgcg cacttcgtcg atgacggggt cnatccattc gaggtccgtc 180
gccgcgtcgg tcgagtggcg gtcacactcc aggtactcga cctcacagac gagaggactc 240
gatcccatct aggtgtggac gaaacagatc ttctgtccga 280

```

```

<210> 422
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 422
tcgcctccgc atatgggtcg acgccaagcg ggtccggatt tctgggcttc atcgctcgcg 60
ccgtcgcgac aaacagcgcg gtcgaaccga cactcgttgt gatgtcccag ctatcacctt 120
cggtacgcac ccaatcgacc ctacncggct atctcagccg cgatctccag gctccgccga 180
gccaggtgca tcccgggtccg gatcccacta acccggcacc attggcgctc 230

```

```

<210> 423
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 423
gtcctcgagt gccgccgtcg ncacncccg cgcccgcgcg gccacttgga tgcgaccgct 60
ttcaagtccc ttcattcatct gcgaaaagcc ttgacccatg gctccgccca ggatcgcgca 120
gaccggcacc cggaggttgt cgaacgacag ctgcgaggat tcgacgccct tgtaacccaa 180
cttcggcaag tcccgcgaca ccgtgagtcg cggcccgggt tcgacgagca cgatcgacat 240
gccttggtgc cgcggtgtgg cgttcgggtc gg 272

```

```

<210> 424
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 424
ggcataccaa tgtggacttc tgetcaccga cgatatccgt ggtctgatcc gctgctgcgg 60
cgggtcgna cctgcntctc ngcggcacc gtnactacat ggcncgcgcc gcacgcatac 120
gtcgcggcgg gaccactcc nactggtcga cgggtgtggc cgcgtgtccg cangtcccna 180
accggccgc accgacgaaa ccggccgcgcg tccgttctgg accaacgctc atgtgccgtc 240
ggggtccatg ctcgacgcca tcgagaccgt aaccagcgtc ctcgagcggg tcgcctccgg 300
cttcggtgac atcttcgtgg ctgctcgcgc cgtgccgcgc cgcggatggg cgaccacaac 360
gccaaccacc tcggcggtga catcacgctc cgcgccactc gacctggcgc gcgatcgcgg 420
ccc 423

```

```

<210> 425
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 425
gtgagcagac ctacgcncnc tggttgcgcc aactcggtac cgatcatggc ggcngcctg 60
tcgtcaccga taccagcga acaagacagc ccggtccgcg acaagatgac tttcccgatc 120
tcttcggcga cttccatggg gtggtccgga gtcccgggcg ccaccgcgag gtaaccctcg 180
tctcagtccc atacgcgacc gggatatcac gtcgcgcaac aacgccacca cctccccaga 240

```

cgccncgttg tacgcggctg ggttccacng caataagtgg cctcanggca tcgtccggcg 300
gcggtcnca acgca 315

<210> 426
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 426
ctcaagcttg aggttaactt tgaacggatc gagctggacg ttcgagacgg tgatcggggc 60
gaacctgaat tgtccggtaa tgcccaacgc aaaaagcagg gtggtggccg gggcggtgaa 120
accggcgctc gcggcaccgt cgaaatctat gtggattgcc ggaatgggga tgtccggcac 180
ggcgaaaccg tagttcgctt gtcccgtgag gcccaggtgg atggggggaa agatcctggg 240
gtccgggata ataatggggc cgatgccgcc ggttgaagtc cactggatcg ggaattccgg 300
aatcttgatc cgacgttcag gccgaacagg ccctc 335

<210> 427
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 427
cggcgacgtc gcgatacgcc gagcagtttg gaatcgctct gcagcaaacc aatattctgc 60
gcgacgttcg agaggacttt ttgaatggac ggatctacct gccgcgcgac gagctggacc 120
gattagggct acgcctccgc ctggacgaca ccggggcact cgatgacccc gacggacggc 180
tcgcggcnct gctgcgggtc agtgccgacc gcgcgcgaga ctggtnttcg ctgggactgc 240
ggctgattcc acacctcgac cgccgcagcg ctgctgctg tgccggccatg tctggcatct 300
accgccgtca gctcgcttg atcagagcat cgccggcggt cgtcta 346

<210> 428
<211> 332
<212> DNA
<213> Mycobacterium tuberculosis

<400> 428
ctataaaata ctcaagcttg atgccgccga aaccgagcgt gagcacgccg ccagccacca 60
cgcgcgggtc gggcgccggg cccggggccgc caggctgctc cgctcgggtg tggcacgcca 120
ccgcgacacc acccgntgc gctacgtcna gccataccgg gcggagctac atcggctcgg 180
ccgccagtg ttccgggccct ctttcgaggt cnaggtcnat accgatttgc gcatccgcag 240
ccgcaccctg aacnacanaa ccgtgcccta ctattgcttg tcnggcgggg ccaaaaaaca 300
gcttggcatc ctggcccnat tggccggcgc gg 332

<210> 429
<211> 276
<212> DNA
<213> Mycobacterium tuberculosis

<400> 429
cttcggctcg agtgtgcgag tgatagatga cgaccgggac ctcgtcggca tcttccatag 60
cccgccacac cttcagttgc tcaccggaat ccaaccggtg gaaggctggc gagcgctcgg 120
cattggctcat cgggatatgc cgctcgggac ggtcagagcc ctcggttcgg gccagcactc 180
cgcaggcttc gtcgggggtg tcgcgacgag catggggccac catcgcatc accaggtctg 240
cgcgaatcnc cancacgtan acngttcctt tctctaa 276

<210> 430
<211> 420
<212> DNA
<213> Mycobacterium tuberculosis

<400> 430
ctggcaccaa ggccccacac gtcaccctgt gacctcctgc gccgaccccg cccgaggtcc 60
tggccgttac caccgaacgg gcgagccggg agtctggtn cgcacgaaca aanagcaagg 120
tgcattggcg gagttgttcc gccacttcgt cgatgacggg gtcnatccat tcgaggtccg 180
tcgccgcgtc ggtcnagtgg cggtcacact ccaggtactc gacctcacag acnaaaggac 240
tcnatcccat ctaggtgtgg acnaaacaga tcttctgtcc gacnactaca ccaccacca 300
ggccatcgcc gccgcccgcg atgccaaactt cgacgccgta ctggccccgg cggggggcgc 360
tccccgggtg tcaacacttg ccgtgttcnt tcacgcnctg ccccatcc aacccaacg 420

<210> 431
<211> 130
<212> DNA
<213> Mycobacterium tuberculosis

<400> 431
gttcttgggc ccatgcggag gtatcgccgt ttccaccacg cggtcggggg ggcggttgc 60
tagctcaccg atggtgcgct tgtgcaggcc gccgggatac cccgagtgcc ggtaaaccat 120
cttgtgtgc 130

<210> 432
<211> 215
<212> DNA
<213> Mycobacterium tuberculosis

<400> 432
caatactcaa gcttggcgtg ccgttccaac ccgaattggc tttcggcgcc atcggtgagg 60
acggcgtgcg ggtgctcaac nacnacgtcg tccgcgggac acacctcgat gctgccgcca 120
tggacgcggg cgaacgcaag cagctgatcg agctacaacg ccgcgcggaa cgcttcggcc 180
gcgggcgtga ccgcatcccg ttgaccgggc ggatc 215

<210> 433
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 433
cntcatgatg atcatcacc gaagtgtggt agccgcagtg gttatcgtgg gtaccgtcgt 60
gctttccatg ggcgcctctt tcgggctttc cgtattggtc tggcaggaca ttctgggtat 120
cgagttgtac tggatggtgt tggcgatgtc ggtgatcctg ctctggcgcg tgggatccga 180
ctacaatctg ctgctgattt cccggttgaa agaggaaatt ggggccggat tgaacaccgg 240
aattatccgt gccatggctg gtaccggggg agtggtgacg gctgccggca tgggtgtcgc 300
cgttaccatg tcgttgtttg tggtcagcga tttgcgaatt attggtcaga tcggtaccac 360

<210> 434
<211> 265
<212> DNA

<213> Mycobacterium tuberculosis

<400> 434

```
atactcaagc ttttacggtg atcgcnatc acctggttca tgaactggaa gcagcgagc 60
gcttcctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg caggtgctcg 120
ggcagctcgg ccgcnacagc cgcctgacct tgaaaccagc ttccatatcc cgcgannaac 180
gacgccagtc cgctacgtna cccctccgcg actgtccatg gacaacagcg cgttctccac 240
cgaccgggcc cgggtgtggg gtntt 265
```

<210> 435

<211> 264

<212> DNA

<213> Mycobacterium tuberculosis

<400> 435

```
gctggtagag tcgctgaccg gtgcaggttt cgacaatgtg gtgccgggtc ggcggtacg 60
tgccatcgag aactgggcgc aggtatcgcc accggttacc ggctacgagc aaatcgcggt 120
atgcgttctt gagcatgagt cggcgaccgt cgtcatggtc gacaccacg acggaaagac 180
gcagatcgcc gtcaagcatg tgtgccgagg attatcagga ctgacctcct ggctgaccgg 240
catgtttggt cgcgatgcct ggcg 264
```

<210> 436

<211> 335

<212> DNA

<213> Mycobacterium tuberculosis

<400> 436

```
gctttccgcc gatacccgcc atgtcnegca catccaggac ttctgggggg atccgctgac 60
agcggcgagg tcccaaagtg cggatgatcg ggccgcctac gtcgtggtgt acctcgtcgg 120
taacaacgaa accgaagcgt atgactcggc ccacgcgggt cggcacatgg tggacaccac 180
accgccaccg cacgggggtga aggcctatgt caccgggtcc gcancactca atgccgacca 240
ggccgaggcc gganacaaaa ntatcgctaa ggtcaccgcg atcacnagca tggatgatcg 300
agcaatgttg ctagtgatct atcgctccgt aatta 335
```

<210> 437

<211> 304

<212> DNA

<213> Mycobacterium tuberculosis

<400> 437

```
cttccaaccc gaattggctt tcggcgccat cgggtgaggac ggctgctggg tgctcaacga 60
cgacgtcgtc cgcgggacac acctcgatgc tgccgccatg gacgcggtcg aacgcaagca 120
gctgatcgag ctacaacgcc gcgcggaaag cttecgccgc gggcgtgacc gcatcccggt 180
gaccgggagg atcgcggtga tcgtcgatga cggcatcgcc accggagcga cggccaaggc 240
ggcgtgccan gtcgcccggg cgcacggtgc ggacaagggt gtgctggcgg tcccgatcgg 300
ccca 304
```

<210> 438

<211> 223

<212> DNA

<213> Mycobacterium tuberculosis

<400> 438

tactcaagct	tgcgcgagatc	cggatggcac	tcacgctgga	caagaccttc	acaaaatctg	60
aaatcctgac	ccgatacttg	aacctggtct	cgttcggcaa	taactcgttc	ggcgtgcagg	120
acgcggcgca	aacgtncctc	ggcatcaacg	cgtccganct	gaattggcag	caagcggcgc	180
tgctggccgg	catggtgcaa	tcnaccagca	cgtcaacc	gta		223

<210> 439
 <211> 263
 <212> DNA
 <213> Mycobacterium tuberculosis

cccacgactt	tctcctcgat	cagttggatt	tgtacgaaga	ggcaacgaaa	gcagtgatcc	60
tcgggatggt	cgacgcctac	atcgacccgc	cgttcacgcc	gcacagcctg	ctagatgcgc	120
tgggcgagca	ggtcccacag	ttcgccgcta	aggcacggcg	tctgttcccg	tccggatcgc	180
cattcggcct	cggcgtcctg	ctcccattcg	atcaataggg	ctggcagctc	cgtcggcagg	240
ggcctacgcc	tcaccccgtc	acg				263

<210> 440
 <211> 301
 <212> DNA
 <213> Mycobacterium tuberculosis

ctcaagctta	tgcgcgccgg	ccgaggtctg	ctcacggcaa	cccctgaagt	ttaggggacn	60
acctactcag	cgcaaaatth	cgctaattgt	agtccgcccc	accaggggna	natcaaccga	120
tgtcgatcat	gatctacccg	gataccggat	tggcggtagc	gcccacgac	gtcnaaatnt	180
ccgcctgaat	catcggatag	ctgatccggc	gtcaacgcgt	tttganttca	ccgcgcaaca	240
gccgccaggc	cggcccgcac	cganccgac	tcntcggggc	gcatggggcc	caatcttntc	300
g						301

<210> 441
 <211> 90
 <212> DNA
 <213> Mycobacterium tuberculosis

gtgtgtggtg	gaacccatct	gagcagtgtg	ccaaaccggg	gcagacagct	cccaattgac	60
gtgagcccg	tcacttgctg	ggtaagcgtc				90

<210> 442
 <211> 183
 <212> DNA
 <213> Mycobacterium tuberculosis

ctttacactt	cctgcatccg	gctcgatatg	tgtgtggaat	tgtgagcgga	taacaatttc	60
acacaggaaa	cagctatgac	catgattacg	ccaagctatt	taggtgacac	tatagaatac	120
tcaagcttgg	gcgtgacggc	caccggggcc	actccgcacc	atctgtaccc	gaccaagatc	180
tac						183

<210> 443
 <211> 348

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 443

```
caggcatgca agcttttagct gcccgaatgc gtcaccccga tgcgcccaga tcgggggcttc 60
gcagataaaag cacgaacagg cgggcaaaac gtcnatctcg gagccggaag ggcaatcagc 120
cgaccgtcga cgaacgacac cggcgagacc acttaggcag tgacggccgg cccgaacatt 180
acgcgctcgt tgattaggcg ttccggtctcg tccgcgggtca tgccgagcag cttgcggcag 240
atctgaacgc tgtcctgtcc gggcagcggc gccggggtt ggggtgcctg cccgaatgtg 300
acgaaacgga gccggacccg tctcggcggg ccgcggacgg cgatccgc 348
```

<210> 444

<211> 335

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 444

```
cncaagcttg cggatgttac ccctgacagc ctgaactatg tcnaaacaca cggcaccgga 60
acggtgttgg gggaccccat cganttcgag tcgctggcgg ccacttatgg cctgggtaaa 120
ggccagggcn anagcccggtg cgcattgggg tcggtcaaaa ccaacatcgg ccacctggag 180
gcggccgccc gtgtggctgg atncatcaag gcggtgctgg cggtgcaacg tgggcacatt 240
ccccgcaact tgcattcac ccggtggaac ccggccatcn acgcgtcggc nacgcggctg 300
ttcgtgccna ccnaaaacc cccgtggccg gcggc 335
```

<210> 445

<211> 289

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 445

```
ggaaccggta accagatcag ctcgctcgacc tcaactgccg ggggtgaattc cccaccgggtg 60
ctgcgcgctg cccagtagtg caccttcttg acgcctcgaa aaggggagtc ggtcgggtag 120
gtcacctgca ggagccgctt acccagggtg gcgcnatagc cggctctctc gagtatctcc 180
cgcaccgccc ccaccgggtg ggtctcacc anattcactt tgcccttggg cagcgaccag 240
tcgtcgtanc nggggcgggtg aatgacaacg atctcgaccg gcccttcn 289
```

<210> 446

<211> 263

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 446

```
tactcaagct tcagaacagg cctgttgtgg gencacccg ctcgccgagt tctgcacgca 60
ccgcctcaag tgccggccgc accgcgggca tctcccggtc acgcagggcc gcggcccgcg 120
ccgcagcgac ggcgtgttcg cgcagttcgc cgtcaatgat gctgacctga tcggccaccc 180
gggcgttctc ggcgtcgtcg cgttactaa tcgcggtgct cagcagcgtc tcgacagcca 240
ccacccgagt ggcgaccagc tgc 263
```

<210> 447

<211> 279

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 447

```
taatgtcttg ccaacgtcac cacaatcgcg atgaattcaa tcatgccgcc cagggcgggc 60
aacccaatgg tggccgcgag cggcagctcg atcgcagcgc ggaggttgcc ggccgccagt 120
tgattcacga acagggtgag gtcataggcg ggcaggatag tgacgaaggc aagacctata 180
tctgccgtcg gaagaagaat cgagtagccg gtcgacacaa cggaagcgaa agtgtccgcg 240
atgttgatga gcgtcgccgg ttgtggcggc ggtggcggc 279
```

<210> 448

<211> 295

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 448

```
tactcaagct ttcgtcagtt catcgcgcca gcagaccaac aagagcatcg ggacatacgg 60
agtcaactac ccggccaacg gtgatttctt ggccgcccgt gacggcgcg aacgacgccag 120
cgaccacatt cagcanatgg ccagcgcggt ccggggccac aggttggtgc tcggcggtta 180
ctcccagggg gcgggcgtga tcgacatcgt caccgcccga ccaactgccc gcctcggggt 240
cacgcagccg ttgccgcccg cagcgganna tcacatcgcc gcgatcgccc tgttc 295
```

<210> 449

<211> 280

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 449

```
ccacccgtgt aatttgggat gggcnaaaag gcnagcacc gcgtggccac gaacgccggg 60
agggacaatc tcggggcggt agggcttctc gcgggaaggc ccgaacgtac ggcgtttcaa 120
cacgtcgcggt cgccctccga ccgcgaacat tcggggatgg cagcaacctg gtagcaccct 180
ggccggggcga tgatctgcag cgtcgccgcg ggtagtcgcc gcccgggcgg ctacagtctg 240
aaacgcgatg accatcgatg tgtggatgca gcatccgacg 280
```

<210> 450

<211> 320

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 450

```
tcaagcttta gctgcccga tccgtcance cgatgcncce agatcggggc ttcgcanata 60
aagcacnaac agggcgggca aacgtcnatc tcggagccgg aagggaatc anccgaccgt 120
cnacaaacga caccggcgan accacttagg cagtgcgggc cggcccgaac attacncgct 180
cgttgattag gcgttcggtc tcgtccgcg gtcatgccgag cagcttgccg canatctgaa 240
cgctgtcctg tccgggcagc ggcgcggggc gttgggggtg ctgcggaatg tgacnaaacg 300
gagccggacc cntctcggcg 320
```

<210> 451

<211> 203

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 451

```
ccggggccac tccgcacaat cngtacenna ccaanatcta caccatcgaa tacgacggcg 60
tcgccgantt tccgcgggtac ccgtcaact ttgtgtcgac cctcaacgcc attgccggca 120
cctactacgt gcaactccaac tacttcatcc tgacgccgga acaaatngac gcntcgggtc 180
```

cgctgaccaa tacggtcggt ccc

203

<210> 452

<211> 287

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 452

```
nctggccttt ggtccacact aanacaatac tcaagcttcc ggccgcagag ccgccaactc 60
acgatatcgt taaccgatat cccgagccga tagctggcgg gctcgggtgg tggccagcgg 120
cgctgcgaacn aaaggtgtga ccgtcatgaa acagacacca ccggcggccg tcggccgtcg 180
tcacctgtc ganatctcag catccgcagc cgggtgtgat gcgctttcgg cgtgtngtgg 240
gtcnccgccc gagcccggca aaggccggcc cgacacaacc ccggaac 287
```

<210> 453

<211> 272

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 453

```
catctgcccc ccacacggac cgcggtgcgg acgcggtctga cgcgcttggg ggtcagcatc 60
gtggccgggtc tgctgttgta tgccagcttc ccgcccgcga actgctgggtg ggccggcgggtg 120
gttgcgctcg cattgctggc ctgggtgctg acccaccgcg cgacgacacc ggtgggtggg 180
ctgggctacg gcctgctatt cggcctgggtg ttctacgtct cgttggttgc gtggatcggc 240
gagctggttg gccccgggccc ctggttgcca ct 272
```

<210> 454

<211> 364

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 454

```
gacaatactc aagcttgact ggccacccac cggcatgacc accgacaggc ccgactggtc 60
gtaccactcg aacgcggggg tggtgatgtc ccagccgctg aantcgtcct gcgcgcgcag 120
gccgtcnaac aggtacaggg cgggcgaatt ggcaccacca ctttggaatt ggaccttgat 180
gtcacggccc atcgacggcg acggcacctg caggtactcc accggcaagc ccggccggga 240
aaatgcccc gcggtcnccg tgccaccgac ggcgcgganc aaaccgaca ctagggccgc 300
gccnacggcc ccgaccacna ntcnacgcga cataccctg acggcgccac naaccctgtc 360
aaca 364
```

<210> 455

<211> 360

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 455

```
cctccaactc ggcggggaag cgacnccagc ctaccgagct tggagtccan gacgccagcg 60
gcggcgctcg tctgcgtcgt ggtgccgccc ggggtggcgtt ggctggcaac gatctccacc 120
cagccggtcg ggttaccac gatctcggca tanacgcggg ccgaggccgg tgcgataccg 180
tattgcgtca attgggacgc ggttggtgat tcggctagct cggttgccac acccgtcagg 240
ggttcgacgt tggcgggttc ggcgggcccc ancaccgctg tcaccatgcc cgccaagccg 300
acctgcggcg ccaccaactg cagcaccanc atgtcgccgt cgcgcgccgc gatcacatgg 360
```

<210> 456
<211> 311
<212> DNA
<213> Mycobacterium tuberculosis

<400> 456
ctcaagcttt ttgagcgtcg cgcggggcan cttcgccggc aattctacta ncgagaantc 60
tggcccgata cggatctgac cgaantcgct gcggtgcanc ccaccctcat tggcgatggc 120
gccgacnatg gcgcctggac cgatcttgtg ccgcttgccg acggcgacgc ggtaggtggt 180
caagtccggt ctacgcttgg gcctttgcgg acggtcccga cgctggtcgc ggttgcgccg 240
cnaaagcggc gggtcggtg ccatcaggaa tgcctcnccg ccgcggcact gcacggccag 300
tgccgcggcg a 311

<210> 457
<211> 288
<212> DNA
<213> Mycobacterium tuberculosis

<400> 457
cnccagcttg attggtcttg ttgcattggc cagctgcgcg agcctggctc acttcaacta 60
cgacgaccgc aaacaattgc cgccttcgga tccgagttcg gttgggtacg cggcaatgga 120
gcaccatttc tcggtgaatc agactattcc tgagtacttg atcatccact ctgcacacga 180
cctgcgaacc ccgcgcggcc ttgccgacct ggagcagctg gcgcaacgtg tgagccagat 240
cccaggcgtt gccatggttc gcggtgtgac ccggccaaac ggggaaac 288

<210> 458
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 458
caatactcaa gcttgactgg gcccgcaact tcggcgccac ccacaccgtc aacgcccgcg 60
aagtcnacgt cgtccaggcc atcggcggcc tcacggatgg attcggcgcg gacgtggtga 120
tcgacgccgt cggccgaccg gaaacctacc agcaggcctt ctacgcccgc gatctcgccg 180
gaaccgttgt gctggtgggt gtccnacgc ccgacatgcg cctggacatg ccgctggctn 240
acttcttctc tcacgg 256

<210> 459
<211> 327
<212> DNA
<213> Mycobacterium tuberculosis

<400> 459
tcgacggttt ggcggcctta aatgcactga ggtcgtcaat tgaccccaca gcggaaatgc 60
cgactattcg caggcctcct tcgccttggc tgccggagag gggctccgcg ggaaccgcat 120
gcaggtatat gacctcggtt tctcggtgc taccgcgtgc cttgtntang atnanctcgg 180
cgttggaatt gtccagccgg cccaattcat cgagcgcana ttcgtacacn tggccggcgg 240
cgacatacgc ttcaccgtgg atctgctcca cacggaccgc cctgtcgga tcctgctcac 300
gggtaangga acttacgtgg cactcgg 327

<210> 460
<211> 100

<212> DNA

<213> Mycobacterium tuberculosis

<400> 460

```
gaccacgccca ggctaatacac gtgacgctac cgaataccct ncctagtggg gcaggctccc 60
gctggaaatg gccctgtacc aactcgcgca ccggtgccag 100
```

<210> 461

<211> 114

<212> DNA

<213> Mycobacterium tuberculosis

<400> 461

```
cggcacccga cccctttgag ccgtccgcgc tggccgcggg ggaactggcc gacgagggac 60
tgatcgtgct gggcaaattg gtcgatggca cgctggccgc cgatctgaag gtcn 114
```

<210> 462

<211> 287

<212> DNA

<213> Mycobacterium tuberculosis

<400> 462

```
ctcaagcttg ccgttaccce gacttccgga gggacaccat gagcacgcc agccgagcac 60
gaggccaaac tccgccgacg caggccgggt ggacttgctg tgctggacaa ggggttttagc 120
cgccgaagca gtgacgtaca tcggcgaaaa gcagttcgcc tgtcgaccga cggngcnnac 180
cgtgaggcta ggggaagcgag gagcacatgg ccgccgaccc gcaatgtaca cgctgcaagc 240
aaaccatcga acccggatgg ctatnctca ccgccatcg ccgcggg 287
```

<210> 463

<211> 288

<212> DNA

<213> Mycobacterium tuberculosis

<400> 463

```
catgtcgcgc acatccagga cttctggggg gatccgctga cagcggcggg atcccaaagt 60
gcggatgacg gggccgccta cgtcgtgggt tacctcgtcg gtaacaacga aaccgaagcg 120
tatgactcgg tccacgcggg gcggcacatg gtggacacca caccgccacc gcacgggggtg 180
aaggcctatg tcaccgggtc ggcagcactc aatgccgacc aggccgaggc cggagacaaa 240
agtatcgcta aggtcaccgc gatcacgagc atggtgatcg cagcaatg 288
```

<210> 464

<211> 255

<212> DNA

<213> Mycobacterium tuberculosis

<400> 464

```
atactcaagc ttcgggtacg tggcggggcg tgctgctggc cgcggtcgcg gcgtgcgcgg 60
cctgcggctc cgtttacnag ctgcgcgtgc tgacactggc ggcnagcctg aacggcgggc 120
ggatcgtggc cacctccctg atcgtcgcgg gctacatagc cgcgctggga gcaggcgct 180
tgctgatcaa gccgctactt gcacacgcgg ccacgcggtt catcgccgtg gaggcgggtg 240
tgggcatcat cggcg 255
```

<210> 465
<211> 288
<212> DNA
<213> Mycobacterium tuberculosis

<400> 465
tgtcaagtcc tttcagatct cntttttatg acatgactgg agatctgtct agattgcagc 60
tcctgtgagc gtgggtaccg gattcaagcc ggtcgggtcac gccgcggtgg taccggcttt 120
gcggcagtg ctcggcctcga gttcggcgat cgcgcgcgaa gtgcgttcgc gcagcaagat 180
cgcgccgcta atgccggcga tgaccgcgat gaccagcgcg atccaggaga accgttccaa 240
ccagtgtctg gcggccatcc cggcgaagta gaccagtga gtggtgcc 288

<210> 466
<211> 224
<212> DNA
<213> Mycobacterium tuberculosis

<400> 466
caatactcaa gtttcaaaac aggcctgttg tgggcgcacc cggctcgccg agttctgcac 60
gcaccgcctc aantgcggcc cgcaccgccg gcatctcccg gtcacgcagg gccgcggccc 120
gcgcccanc gacggngtgt tcgcgcagtt cgccgtcaat gatgctgacc tgatcggcca 180
cccgggcgtt ctgcgcgtcg tncggttcac taatcgcggt gctc 224

<210> 467
<211> 320
<212> DNA
<213> Mycobacterium tuberculosis

<400> 467
tacgtggtcg ctggagggag ccanntacaa catccacgcc aatgctcttg ccccgatcgc 60
ggcgaccagg atgaccagg acatcctgcc gccgaagta ctggaaaagc tcacaccgga 120
gttcgtcgca ccggtggtgg cctacctgtg caccgaggag tgtgccgaca acgcatcggt 180
gtacgtcgtc ggtggtggca aggtgcagcg agttgcgtg tttggcaacg acggcgccaa 240
cttcgacaaa ccgccgtcgg tacaagatgt tgccggcgcg tgggccgaga tcaccgatct 300
gtccggtgcg aaaattgctg 320

<210> 468
<211> 303
<212> DNA
<213> Mycobacterium tuberculosis

<400> 468
gcttttcccg tccgtcnncg ctcaaccgcg tgaggccgaa gcgngtggtt acgactccct 60
gtttgtgatg gaccattct accaactgcc catgttgggg acncccgacc agccgatgct 120
ggaggcctac acggcccttg gtgcgtggc caccggcgacc gancggctgc nntggggcgc 180
gttggtgacc ggcaatacct accgcagccc gacctgctg gcaaanatca tcaccacgct 240
cgacgtggtt agcgcgggtc gagcgatcct cggcattgga gccggttggg ttganctgga 300
aca 303

<210> 469
<211> 391
<212> DNA
<213> Mycobacterium tuberculosis

<400> 469
 cngcttttta atggccttga cntgggpcgng ccggccaccg gggccactcc gcacaatctg 60
 tacccgacca agatctacac catcgaatac gacggcgtcg ccgactttcc gcggtaccgg 120
 ctcaactttg tgtcgaccct caacgccatt gccggcacct actacgtgca ctccaactac 180
 ttcatcctga cgccggaaca aattgacgca gcggttcgcg tgaccaatac ggtcgggtccc 240
 acgatgaccc agtactacat cattcgcacg gagaacctgc cgctgctaga gccactgcga 300
 tcggtgccga tcgtggggaa cccactggcg aacctggttc aaccaaactt gaaggtgatt 360
 gttaacctgg gctacggcga cccggcctat g 391

<210> 470
 <211> 343
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 470
 ctcaagcttg cggggagggt gcatggccga ctcggtatta cccaccangg ggcgccaacg 60
 cgggtgtccgc gccgtcnagc tgaacgttgc tgcccgctg gagaacctgg cgctgctgcg 120
 caccctggtc ggcgccatcg gcaccttcga ggacctggat ttcgacgccg tggccgacct 180
 gaggttggcg gtggacgagg tgtgcacccg gttgattcgc tcggccttgc cgcatgccac 240
 cctgcgcctg gtggtcgatc cgcgaaaana cgaanttgtg gtggaggctt ctgctgcctg 300
 cgacacccac nacgtggtgg caccgggcag ctttagctgg cat 343

<210> 471
 <211> 303
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 471
 ccgacgccgt cgtggccacc aacaccgcga ccagcacctg gaccgggacc ggggtgccgc 60
 gcgaaccggt cttggccaat tgccgcggca ccaagccgtc gcgcgccatg gcgaacagca 120
 cgcgccattg cccgagcatc aacaccatca ccaccgtggt aagcccggcc agcgcgccga 180
 cggagatgat gccgctggcc cagtacaccc cgttggcctg gaacgcggtg gccagatttg 240
 ccggcccgcg gcccggtacg gtccgcagtt ggggtgatgg aaccatgccc gacagcacca 300
 ccg 303

<210> 472
 <211> 264
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 472
 ttactggcc tttggtccac actagacaat actcaagctt ccaggacatc gtcacgcgca 60
 ccaaaaccgc gagctaggtc ggcacccggg aagcatcgcg acaccgtggc gccgagcgcc 120
 gctgccggca ggccgattag gcgggcaaat tagcccgccg cggtccccgg ctccgantac 180
 ggcgccccga atggcgtcac cggttggtta ccacgcttgc gcgcctgggc ggcggcctgc 240
 cggatcaggt ggtaaatgcc gaca 264

<210> 473
 <211> 280
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 473
ngacgtcttc catccgcgcg tcgttttggc gggttggcca cagcagcccg ccggtgacgg 60
cgacgatgct gggctggttg cggccctgcg ccaccgcggc ttgcatgctg gttggctgtc 120
ttgggacgat cccgaaatag tccacgcgga tctggtgatt ttgcgggcta cccgcgatta 180
ccccgcgcgg ctcgacgagt ttttggcctg gactaccgcg gtggccaatc tgctgaactc 240
gcggccggtg gtggcctgga atgtcgagcg ccgttaccta 280

<210> 474
<211> 153
<212> DNA
<213> Mycobacterium tuberculosis

<400> 474
cttcctcctg agtacnccc gtntactttg ggatgggtaa aaaggcgaat cncgttttgg 60
tcacgaacgc cgggagggac aatctcgggc ggctggggcc tctcgcgga angcccgaat 120
gtacggtgtc tcgacacttc cntccccct ccg 153

<210> 475
<211> 247
<212> DNA
<213> Mycobacterium tuberculosis

<400> 475
gagcatcggg acntacggag tcaactaccc ggccaacggt gatttcttgg ccgccgctga 60
cggcgcgaaac gacgccngcg accacattca gcagatggcc agcgcgtgcc gggccacgag 120
gttggtgtct ggcggtact cccagggtgc ggcntgatc nacatcgtca ccgccgcacc 180
actgccgggc ctcgggttca cgcagccggt gccgcccnca gcggacgatc acntcgccgc 240
gatcgcc 247

<210> 476
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

<400> 476
tactcatgan catcctttaa tcanngcttt gcgttttttt attaaatctt gcaatttact 60
gcaaagcaac acaaaaatcg caaagtcac aaaaaaccgc aaagtgtgtt aaaataagag 120
cancactaca aaaggagata agaagagcac atacctcagt cacttattat cactagcgct 180
cgccgcagcc gtgtaaccga gcatagcgag cgaactggcg aggaagcaaa gaagaactgt 240
tctgtcagat agctcttacg cnca 264

<210> 477
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

<400> 477
ctcaagcttc aggtcaatgt gcnccaagcc ctgacgctgg ccgaccaggc caccgcgcgc 60
gganacnctg ccaaggccac cgaatacaac aacgcgcgcg aggcgttcgc ancccagctg 120
gtgaccgcgc agcanancgt caaaaaccto aagacgctgc atgaccaggc gcttanccnc 180
gcanctcagg ccaagaaggc cgtcnaacga aatgcgatgg tgctgcacca naagatcgcc 240
gagcgaacca agctgctcag ccng 264

<210> 478
<211> 352
<212> DNA
<213> Mycobacterium tuberculosis

<400> 478
catggtggca ctgtagcgac gtgctgcaat caaggtcatg cccgactctg gtcagctcgg 60
anccgctgac accccgctaa ggctgctcag ctcggtgcat tacctcaccg acggcgaact 120
ccccagctt tacgactatc cggatgacgg cacctggttg cgggcgaact tcatcatcag 180
cttggacggc ggcgctaccg tcgatggcac cagcggggcg atggccgggc ccggcgaccg 240
attcgtcttc aacctgttgc gtgaacttgc cgacgtcatc gtggtcggcg tgggcaccgt 300
gcgcattgag ggctactccg gcgtccggat ggggtgctgc cagcgccagc ac 352

<210> 479
<211> 207
<212> DNA
<213> Mycobacterium tuberculosis

<400> 479
tactcaagct tgcgggtgat cgccttggtc aacggcaccg tgatcggatc ggggtcnacc 60
gcacaaatgg actggagctt cggcgaantc atcgccatg cctcgcgggg ggtgacgctg 120
accccggggtg acntgttcg ctcgggcacg gtgcccacct gcacgctcgt ctatcacctc 180
nggccaccg aatcattccc gggctgg 207

<210> 480
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 480
gttgngcct cgtcggcgaa cagttctcgc acgatttccg gattagcggg actggtcacc 60
agttgggtat gcgggaaggc gctgacgttc gccgcgatta gctgtttgat ggacgcggtg 120
gtgatgttct gatcacgaa ctggctgtaa tagcccaggg tcgccacgct ttcattccggg 180
cccgaccg gcgcaccgag cgtgtcgcgc aggtatgcga cgtgattttc gctgaagtcc 240
ccgtaccg agaact 256

<210> 481
<211> 397
<212> DNA
<213> Mycobacterium tuberculosis

<400> 481
tgcttccggc tcgtatgttg tgtggaattg tganccgata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagctccagg 120
tcaatgtgcy ccaagccctg acgctggccg accaggccac cgccgcggga gacgtgcct 180
ttgtcaccga atacaacaac gccgccgagg cgttcgcagc ccagctggtg accgccgagc 240
agagcgtcga agacctcaag acgctgcatg accaggcgt tagcgccgca gctcaggcca 300
agaatgccgt cgaacgaaat gcgatggtgc tgcggcataa gatcgccgag cgaaccaagc 360
tgctcagcca gctcgagcag gcgaagatgc acgagca 397

<210> 482
<211> 379

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 482

```
caggcatgca agcttcggag gcagaccggt gcatgggtggc actgtagcga cgtgctgcaa 60
tcaaggtcat gcccgaactct ggtcagctcg gagccgctga caccgctga aggctgctca 120
gctcgggtgca ttacctcacc gacggcgaac tccccagct ttacgactat ccgatgacg 180
gcacctggtt gcgggcgaac ttcacagca gcttggacgg cggcgctacc gtcgatggca 240
ccagcggggc gatggccggg cccggcgacc gattcgtctt caacctgttg cgtgaacttg 300
ccgacgtcat cgtggtcggc gtgggcaccg tgcgcattga aggctactcc ggcgtccgga 360
tgggtgtcgt ccatcgcca                                     379
```

<210> 483

<211> 264

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 483

```
tactcaagct tgggggtggcg ctgtcgggtcg gtgtgcttgg cggcgctcgg atcaacaccg 60
cccacgaaat ggggcacaag aaggattcgc tggagcgggtg gctgtccaaa atcacctctg 120
cccanacctg ctacgggcac ttctacatcg agcacaaccg tggccatcac gtccgggtgt 180
ccacaccgga ggaccggcg tggcgcggtt tggcnaaac gttgtgggan ttcctgcccc 240
gcantgttat cggcggcttg cgct                                     264
```

<210> 484

<211> 351

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 484

```
ggccatcgcc accgcncgcg ggcgaacgct caaaggcacc tactggcacc aaggcccccac 60
acgtcaccct gtgacctcct gcgccgaccc cgcccgaggt cctggccggt accaccgaac 120
gggcgagccg ggagtctggt acgcatcgaa caaagagcaa ggtgcatggg cggagtgtgt 180
ccgccacttc gtcgatgacg gggtcgatcc attcgaggtc cgtcgcccg tgggtcgagt 240
ggcggtcaca ctccangtac tcgacctcac agacgagagg actcgatccc atctaggtgt 300
ggacgaaaca gatcttctgt ccgacgacta caccaccacc caggccatcg c                                     351
```

<210> 485

<211> 328

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 485

```
gcttgccgggt gatcgcttgg gtcaacggca ccgtgatcgg atcggggtcn accgcncaga 60
tggactggan cttcggcgaa ntntcgcct atgcctcgcg gggggtgacc ctgaccccg 120
gtgacntgtt cggctcgggc acggtgccca cctgcacgct cgtcaagcac ctngggccac 180
cggaatcatt cccgggctgg ctgcacnacg gcgacntggt cncctccag gtcgaagggc 240
tgggcnaaac aangcagacc gtccggacaa ncggcactcc ttttccgttg gctcttcggc 300
cgaatccgga cgcnaaccc gaccggcg                                     328
```

<210> 486

<211> 344

<212> DNA

<213> Mycobacterium tuberculosis

<400> 486

```
gttctcgcac gatttccgga ttagcgggac tggtcaccag ttgggtatgc gggaaggcgc 60
tgacgttcgc cgcgattagc tgtttgatgg acgcggtggt gatgtnctga tcacggaact 120
ggctgtaata ncccagggtc gccncgcttt catccgggcc cggacccggc gcaccgagcg 180
tgtcgcgcag gtatgcgacg tgattttcgc tgaagtcccc gtacccggag aactcgaaca 240
cgctgaggcg ctgcgtcaccg tcgtnnccggc gaccaagcgc ggcgagcaac tgcgcaaaat 300
cgttaagana ggtcgaatcg ttgaaattcg gcaccacctg cacc 344
```

<210> 487

<211> 285

<212> DNA

<213> Mycobacterium tuberculosis

<400> 487

```
cacaagacaa tactcaagct tcaggtcaat gtgcnccaag ccctgacgct ggccgaccag 60
gccaccgccg ccgganacgc tgccaaggcc accgaatata acaacgccgc cgaggcggtc 120
gcagcccagc tggtgaccgc cgagcananc gtcnaaaacc tcaagacgct gcatgaccag 180
gcgcttancc ccncagctca ggccaagaag gccgtcgaac gaaatgcgat ggtgctgcag 240
canaanatcg ccgancgaac caagctgctc agccagctcg agcag 285
```

<210> 488

<211> 280

<212> DNA

<213> Mycobacterium tuberculosis

<400> 488

```
ccaccctgtc atggtggcac tgtagcgacg tgctgcaatc aaggtcatgc ccgactctgg 60
tcagctcgga gccgctgaca ccccgctaag gctgctcagc tcggtgcatt acctcaccga 120
cggcgaactc cccagctttt acgactatcc ggatgacggc acctggttgc gggcgaactt 180
catcagcagc ttggacggcg gcgctaccgt cgatggcacc agcggggcga tggccggggc 240
cggcgaccga ttcgtcttca acctgttgcg tgaacttgcc 280
```

<210> 489

<211> 160

<212> DNA

<213> Mycobacterium tuberculosis

<400> 489

```
gctttccgcc gataccncc atgtcccga catccaggac ttctgggggg atccgctgac 60
agcggcggga tcccaaagtg cggatgatcg ggccgcctac gtcgtggtgt acctcgncgg 120
taacaacgaa accgaancgt atgactcngt ccacgcggtg 160
```

<210> 490

<211> 176

<212> DNA

<213> Mycobacterium tuberculosis

<400> 490

```
caacccgant tggctttcgg cgccttcggt gaggacggcg tgcgggtgct caacgacgac 60
gtcgtccgcg ggacacacct cgatgctgcc gccatggacg cggtcgaacg caagcagctg 120
atcgatctac nacgccngn ggaacgcttc ngccgcgggc gtgaccgcnt cccgtt 176
```

<210> 491
<211> 216
<212> DNA
<213> Mycobacterium tuberculosis

<400> 491
gggatgggca aaaaggcgaa gcaccgctg gccacgaacg ccgggagggga caatctcggg 60
cggctagggc ttctcgcggg aaggcccga cgtacggcgt ttcaacacgt cgcgtcgccc 120
tccgaccgcg aacattcggg gatggcagca acctggtagc accctggccg ggcgatgatc 180
tgccagcgtc cccgcgggta gtcgcccgc gggcgg 216

<210> 492
<211> 163
<212> DNA
<213> Mycobacterium tuberculosis

<400> 492
cagcagacca acaagagcat cgggacatac ggagtcaact acccggccaa cggtgatttc 60
ttggccgccc ctgacggcgc gaacgacgcc agcgaccaca ttcagcagat ggccagcgcg 120
tgccggggcca cgaggttggg gtcggcggc tactcccacg gtt 163

<210> 493
<211> 80
<212> DNA
<213> Mycobacterium tuberculosis

<400> 493
ctcaagcttg actggccacc caccggcatg accaccgaca ggcccgactg gtcgtaccac 60
tcgaacgccg ggggtgttga 80

<210> 494
<211> 248
<212> DNA
<213> Mycobacterium tuberculosis

<400> 494
ttggtgcccc gaatggcgag tcccatttan tcgctgattt gtttgaacag cgacgaaacc 60
ggtgttgaaa atgtcgccctg ggtcggggat tccctctcca agcaagagta actggcccca 120
aataaagtta ctgcgtcgtc tgcaaagacc gctaccgat gccatttatg tgtttcctta 180
cgctcnnnt tccggtgcgc catcattatc tgcacctttg cactgcacat tgagcttagc 240
agcgtcgc 248

<210> 495
<211> 341
<212> DNA
<213> Mycobacterium tuberculosis

<400> 495
gaattngctt tcggcgccat cggcccagga ccgcgtgcgg gtgctcaacg acgacgtcgt 60
ccgcgggaca cacctcgatg ctgccgccat ggacgcggtc gaacgcaagc agctgatcga 120
gctacaacgc cgcgcggaac gtttcgcgc cgggcgtgac cgcattccgt tgaccgggcg 180

gatcgngtg	atcgtcgatg	acggcatcgc	caccggagcg	acggccaagg	cggcgtgcc	240
ggtcgcccgg	gcgcacggtg	cggacaaggt	ggtgctggcg	gtcccgatcg	gccagacga	300
catcgtggcg	agattcgccg	ggtacgccga	tgaagtgggtg	t		341

<210> 496
 <211> 420
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 496						
taaagctttc	gtcagttcat	ngngccccc	gaccaacaaa	agcatcggga	catacggagt	60
caactacccg	gccaacgggtg	atttcttggc	cgccgctgac	ggcgcnaacg	acgccagcga	120
ccacattcag	cagatggcca	gcgcgtgccg	ggccacgagg	ttggtgctcg	gcggctactc	180
ccagggtgcg	gccgtgatch	acatcgtcac	cgccgcacca	ctgcccggcc	tcgggttcac	240
gcagccgttg	ccgcccgcag	cggacgatca	cntcgccgcg	atcgccctgt	tcgggaatcc	300
ctcgggccgc	gctggcgggc	tgatgagcgc	cctgaccctt	caattcgggt	ccaanaccat	360
cnacctctgc	aacaacggcg	acccgatttg	ttcggacggc	aaccggtggc	gancgcacct	420

<210> 497
 <211> 135
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 497						
ccgggagggg	ccatcncggg	cggctncggc	ttctctccgg	aaggttctan	ngtnnngcgt	60
ttcnacnctt	cccgtcgccc	tgcgaccgcc	gaacattcgg	ggtatggng	cancctgtna	120
gcattcnggc	cgggc					135

<210> 498
 <211> 277
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 498						
ctcaagcttc	cgcattcagat	cgctatagaa	ccggtgcgcg	tccccaccga	gtggctggtc	60
gccttcacgc	acgatcggtta	ccgcgttatc	ggaatcaaac	tcnccgaaca	cctgaccaac	120
gcgcttgatc	gcctgaatcg	atgcggcgctc	gctggggctc	atcgataccg	agtgtgcttt	180
tccgaccact	tccagttgcg	gtacggcgag	attgacaaa	gcggtgaagc	ccagccagag	240
caggacgatc	accnccgcaa	accggcggat	ttgcccc			277

<210> 499
 <211> 323
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 499						
gcttggcagc	ctgcggctgg	gcgccctnga	gctcttcgat	ctggatctcc	ggactcgaga	60
tgctcacttg	cccggccgtg	gacgtaccca	ttgcggcccg	gacccagcg	ccccaggtga	120
ccagcgagtt	gggctgcacg	ctgaccggcc	cgtcggggtc	gacgcgggta	acggtcagca	180
gctccgangt	ccnctgatc	ccgaccgcag	ctgccaatgc	gcggctggca	gccgacgtgg	240
atgtgccggg	gcctagatcg	cggggcagca	gcgagaccgc	gtcaccgacg	gtcatcacct	300
tgccgagttt	nggcctgccg	can				323

<210> 500
<211> 148
<212> DNA
<213> Mycobacterium tuberculosis

<400> 500
gcttcgggt cgtatgttgt gtggaattgt gagcggataa caattncaca caggaaacag 60
ctatgaccat gattacgcca agctatctag gtgacactat agaataactca agcttgagcc 120
atcgggctat cagctgggtg atgtcccg 148

<210> 501
<211> 242
<212> DNA
<213> Mycobacterium tuberculosis

<400> 501
caggcatgca agcttgctgt ctatcacatc cgaccaccaa ccgcccgcgc gctcggcaga 60
acgcctccgc atatgggtcg acgaccagcg ggctcggactt ctgggctgcc agcgctcgcg 120
ccgtcgcgac aaacagcgcg gtcgaaccga cactccttgt gatgtccac ctatcacctt 180
cggtacgcac ccaatcgacc ctacgcgggt agctcagccc cgatcttcca gagctccgcc 240
cg 242

<210> 502
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

<400> 502
gctttttgag cgtcgcgcgc ggccggcttcc ccggcaattc tactagcgag aagtctggcc 60
cgatacggat ctgaccgaag tcgctgcggt gcagcccacc ctattggcg atggcgccga 120
cnatggcgcc tggaccgatc ttgtgccgct tgccgacggc gacgcggtag gtggtcaatt 180
ccggtctacg cttgggcctt tgcggacggt cccgacgctg gtcgcggttg 230

<210> 503
<211> 235
<212> DNA
<213> Mycobacterium tuberculosis

<400> 503
cgancctggt cgacggctac ctgaatcacc ccgatnccac cgccgcggcg ttcgacgcgc 60
acagctggta ccgcaccggc gacgtcgcgc tggctcgacgc cagtgggatg caccgcatcg 120
tgggacgcga gtcggctcgc ttgatcaagt cgggtggata ccgggtcggc gccggtgaaa 180
ttgaaacggt gctgctcggg catccggacg tggcggaggc ggcagtcgct ggggt 235

<210> 504
<211> 152
<212> DNA
<213> Mycobacterium tuberculosis

<400> 504
naagctttgt cacaccaagt gtttenacca gncgctccat ccggcgaagt ggatactccc 60
agcaggtagc aggtcgccac cacgctggtc agtgcgcgct cagctcgctt gcggcgctgc 120

agcagccagt ccgggaaata gctgccctgg cg

152

<210> 505

<211> 192

<212> DNA

<213> Mycobacterium tuberculosis

<400> 505

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cgctggncgc cggcgctggg ctgcggtaac caattaccac aacacttttc ggtagccgaa 60
cagcggcgcg taccagcgaa atggcacagc caccgcagtc gccgacatcc cgcgaagatg 120
tggcagattt tcgtgcggtc gagccggcga aggcctagcg tcattgttgc ctggcaaggt 180
tgctgggccc gg                                     192
```

<210> 506

<211> 312

<212> DNA

<213> Mycobacterium tuberculosis

<400> 506

```
ctcaagcttc ttctgccct tgcggttncg gatnacatcc cgcagcgact cggcttcggc 60
gtcgaatgct aagttctcga tcagcttctg gatcgactcc gcgcccatgg caccggtgaa 120
gtactcgccg tagcggtcga cnagttcgcg gtagaggttt tcgtcnacna tcagctgctt 180
gggcgccanc ttggtgaaag tgctccaaat gtcctccaac cggtcagct cacgctgcgc 240
gcggtcacgg atctggcgca tctcgcgctc gccgcgctcg cgaacttgcg ccgcgcatcg 300
gccttggggc cc                                     312
```

<210> 507

<211> 296

<212> DNA

<213> Mycobacterium tuberculosis

<400> 507

```
gttcacacct acctactatg ccncaattcn ccgacacggg tggcatcaac acgggcgata 60
aggtggaaat cgctgggggtg aacgtcgggc tgggtgcgctc gctggcaatc cgcggcaacc 120
gcgtgttgat cggattctcg ttgcccggca agacaatcgg gatgcaaagc cgggcagcaa 180
ttcncncna caccattctt ggccgtaaga acctggagat cgaaccccg cgttcggagc 240
cgttgaaacc caacggtttc ctgccgttgg cgcnaaccac tacgccatac caaatc 296
```

<210> 508

<211> 208

<212> DNA

<213> Mycobacterium tuberculosis

<400> 508

```
ctcaagcttt acgccgacgc cggcctacac aacaccaagg aaacgattgc ctactgccga 60
atcgggggaa ggtcctcgca cacctggttc gtgttgcggg aattactcgg acacaaaac 120
gtcaagaact acgacggcag ttggacagaa tacggctccc tgggtggcgc cccgatcgag 180
ttgggaagct gatatgtgct ctggaccc                                     208
```

<210> 509

<211> 278

<212> DNA

<213> Mycobacterium tuberculosis

<400> 509

```
tccncatgg gataacgggt ttagatttcn acaacggcac cgtgtttctc aacaagccgg 60
tcatcagctg ggccggcgac aacggtatct acttcacccg ctttcgcccg tacaagaaaa 120
accactagge caccatcgag tccaagaaca accacctggg ccgcaagtac gcgttctact 180
accgctatga caccgcccag gaacgcgccg tgctcaaccg gatgtggaag ctggtcaacg 240
accgcctcaa ctacctcacc ccgaccatca aaccgatc 278
```

<210> 510

<211> 177

<212> DNA

<213> Mycobacterium tuberculosis

<400> 510

```
ctcaagcttg ggtgttgccg atcacccgaa gccncatgat cagccacggt tcgcccggcc 60
cggcatacgg cgccgtaccg atctccgcgt catacaccgg cgggtaatcg ccgacgggtgc 120
cggttcgcga gccgaagggt acaacgctga ttgaatcnag ttccangtcc agcgggt 177
```

<210> 511

<211> 296

<212> DNA

<213> Mycobacterium tuberculosis

<400> 511

```
tnaacagctc gcggcagccc acgacctgct gcgtcggatt gccggcggcg agatcaattc 60
caggcagctc ccggacaatg cggctctgct ggcccgcac gaangactcg aggtcacccc 120
ggtgccgggg gtcgtgggtg acctgccgat cgcacagggt ggcccacaac cggccgcttg 180
atgnnnngtc ggcaagcccc gcagtngcca aaccacgct gatcangctc ggctcgcgag 240
ttcggcgaan aagtggctcg cctgatcacc taccatcggc cangatctgc gtgtca 296
```

<210> 512

<211> 223

<212> DNA

<213> Mycobacterium tuberculosis ~

<400> 512

```
gccanccggc ttggcgctga ctcccgttcn gcacatcata cgggtccccg tactgtccaa 60
ctgcgccggt gcgctagcca aacgtcacga ctctcagtga tcccagttcg tgatccggcc 120
ggtggcgccg ctgcggcggg ggctnatnta cttcggactn attatctcat ccaaaggaca 180
ccgggccggt ggctggaatc ccatggtgcg atcgccaca can 223
```

<210> 513

<211> 147

<212> DNA

<213> Mycobacterium tuberculosis

<400> 513

```
ccgacctggt atcttccgat agcgcgcggt gatatccggt ctgatctcct gcccttaacg 60
ccggatctca gcaggctccc atgcaaagat ccgagggtgc ccngatctag gggctcctcg 120
cctccagatg atggagcaag tcggccc 147
```

<210> 514
<211> 149
<212> DNA
<213> Mycobacterium tuberculosis

<400> 514
ctcaagcttc ggctcaggcg gcgctgccg taacgtcgct gaccgggtgca ggtttcgaca 60
atgtgggtgcc ggttcggcgg ctacgtgcc tcaagacact ggcgaggct atcgaccccg 120
ttatcggcta caaacaatc gcggtatgc 149

<210> 515
<211> 238
<212> DNA
<213> Mycobacterium tuberculosis

<400> 515
catcacctgn ttcatgaact ggaagcaccg cagcgcttcc ttttcggccg caacatgagc 60
cagcctctcg tcggcggtcg ggtgcagggtg ctcgggcagc tcggccgcga cagccgcctg 120
accctgaaac cagcttccat atcccgcgac gaacgacgcc agtccgctac gtaaccctc 180
cgcgactgtc catggacaac agcgcgttct ccaccgaccg ggcccgggtg tgggggtgt 238

<210> 516
<211> 175
<212> DNA
<213> Mycobacterium tuberculosis

<400> 516
agcttagctt cccgccccgg caatagggct ccagctcatc cgggtgtgacc agataggggc 60
ccagggatgat accgctgtct ttgcccttgg cctgtccgat gcgcagctgg ccctccagca 120
tctgcaggtc ccgtgcggac cagtcgttga aaatggtata gccgatgatc gaccg 175

<210> 517
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 517
ccngaacaga agcggngggt cctaccgcgg tgtgcggccg gcgcgatatc ggccttttta 60
ctaaccgaac ccgatgtggg ctccgatccg gcgcgatgg catcgacggc gacgccgatc 120
gatgaccgcc aggcttacca cctt 144

<210> 518
<211> 174
<212> DNA
<213> Mycobacterium tuberculosis

<400> 518
ctcaagcttg cgcgactcga caagcattct tgacagttgt tttggctcgg catggtttagc 60
caaggttctg cggteccacc agatcatctt ggtccggtag cgctcgtccg ggtatgctgc 120
cgccgggatt ctgctgcta ttaactcccc cgaagaacgc caccgggtcca gcgc 174

<210> 519

<211> 187
<212> DNA
<213> Mycobacterium tuberculosis

<400> 519
gcnaggcggt atagcttccc gtcgtaccg cgaccgccag ccgagaagct cgttttccca 60
gtgttgctgg ggattctcac gctgctgctg agtgcggtcc agaccgcttc cgcttcgggt 120
tacaacgagc cgcggggcta cgatcgtgcg acgctgaagt tgggtgttctc catggacttg 180
gggatgt 187

<210> 520
<211> 215
<212> DNA
<213> Mycobacterium tuberculosis

<400> 520
gtgtggaacc gtgagcggat aacaatttca cacaggaaac agctntgacc ttgattacgc 60
caagctatatt aggtgaggct atattaatac tcaagattgc ggtcgagcac atcggcccaa 120
gaaccgccga aggcacggcg gaacgcctgc ggcacatggg gcgacgacca gcgggtcgga 180
cttctgggct gtccagccgg atcgcgccgt cgca 215

<210> 521
<211> 406
<212> DNA
<213> Mycobacterium tuberculosis

<400> 521
cactgtcagt acatatgcgc cgctcctcct catcgtgctg ctcggcatcg tcgccggcg 60
tcatggcgct accctaccca agccgaacgc gaaacgagaa cgtgttccat tattaggggtg 120
tgagcaccaa taccagattg ctcaccagga actcacgcag caccgggacg gatgtcagcc 180
accacgcccc tctgggggtg tagcggggaa atacggctaa cgcggtccg gtgccggcag 240
cccagcgcag accctcggcg gcggacacgg caaacaacga cgaccatag ttgttctttg 300
ccggatggcc gtgtttgcgg acatatcggg cgggcgcgcg ggccgcgcgg aggtagtggc 360
tgaggcccat ctcgtgcccc ccgaatggcc ccagccaaac cgtgta 406

<210> 522
<211> 180
<212> DNA
<213> Mycobacterium tuberculosis

<400> 522
ctcaagcttt tacggtgatc ggcgatcacc tggttcatga actggaagca gcgcagcgct 60
tccttttcgg ccgcaacatg agccancctc tcgtcggcgg tcgggtgcag gtgctcgggc 120
agctcggccg cgacagccgc ctgaccctga aaccagcttc catatcccgc gacnaacgac 180

<210> 523
<211> 69
<212> DNA
<213> Mycobacterium tuberculosis

<400> 523
ctcagaagcc gctagctggg agagtcgctg accggtgcac gtggcgcncaa tgtgcgctgc 60
cggttcgcg 69

<210> 524
<211> 168
<212> DNA
<213> Mycobacterium tuberculosis

<400> 524
ctcaagcttg cgctcatcaa ggcggaacag cagggcggtc ggctggtcgc catgacgggt 60
gacgggacca atgacgcacc cgcgctcgcg caagccgatg tcgggggtggc natnaatacc 120
ggcaccagc cggcccggga agccggcaac atggtcnatc tccactcc 168

<210> 525
<211> 83
<212> DNA
<213> Mycobacterium tuberculosis

<400> 525
acttctatct cgactgggtg gctgtggcgc gatccgactg ccggcgtggc caaggccggc 60
cagttgtggg atnccacagc cac 83

<210> 526
<211> 173
<212> DNA
<213> Mycobacterium tuberculosis

<400> 526
gcttgtcgta ttccgtggca ctgtcagaca tatgcgccgc tctctctcat cgctgcgctc 60
ggcatcgctg ccggcggtca tggcgtcacc ctaccaagc cgaacgcgaa acgagaacgt 120
gttcattat taggggtgtga gcaccaatac cagattgctc accaggaact cac 173

<210> 527
<211> 38
<212> DNA
<213> Mycobacterium tuberculosis

<400> 527
cgatattcgt cggccgcggt gtctcgactg ggctcgct 38

<210> 528
<211> 136
<212> DNA
<213> Mycobacterium tuberculosis

<400> 528
gacctcgcc accaagccgg acgcgaccgt cgaggtggcg atccggcttg gcgtcgaccc 60
gcgtaaggca gaccacatgg tccgcggcac ggccancctg ccacacggca ctggtaagac 120
tgcccgcgtc gcggcn 136

<210> 529
<211> 114
<212> DNA

<213> Mycobacterium tuberculosis

<400> 529

```
ccggaagtct aggggacgac ctactcagcg caaaatgtcg ctaatgtgag tccgccccac 60
cagggcagat caacccatgt cgatgatgac ctacccgat accggattgg cggt      114
```

<210> 530

<211> 119

<212> DNA

<213> Mycobacterium tuberculosis

<400> 530

```
agcttcagtt cctccacgac gcgttcccaa atgaatttcc cgatcccaca atctcggttc 60
agatacaggt cgccataccc cttacttcgg naacgctggg cggattggcc ctgccgctg  119
```

<210> 531

<211> 99

<212> DNA

<213> Mycobacterium tuberculosis

<400> 531

```
ccgcctacgg gtcgaacatg catcccgaga ccgatgctcg agcgcgcacc ccactcgccg 60
atggccggaa ccggctgggt acccggttgg cggctgacc      99
```

<210> 532

<211> 308

<212> DNA

<213> Mycobacterium tuberculosis

<400> 532

```
gcggctgggtt acgactccct gtttgtgatg gaccacttct accaactgcc catgttgggg 60
acgcccagacc agccgatgct ggaggcctac acggcccttg gtgcgctggc cacggcgacc 120
gagcggctgc aactgggcgc nttggtgtnacc ggcaatacct accgcagccc gacctgctg 180
gcaaagatca tcaccacgct cgacgtgggtt agcgcgggtc gagcgatcct cggcattgga 240
gccggttggt ttgagctgga acaccgccag ctcggttcg agttcggcac tttcagtgc 300
cggttcan      308
```

<210> 533

<211> 328

<212> DNA

<213> Mycobacterium tuberculosis

<400> 533

```
gcctttccgc acaatctgta cccagagacc ntctaaaaaa tcgaatacga cggcgtcgcc 60
gactttccgc ggtaccgct caactttgtg tcgaccctca acgccattgc cggcacctac 120
tacgtgcact ccaactactt catcctgacg ccggaacaaa ttgacgcagc ggttccgctg 180
accantntg tcggtccac gatgaccag tactacatca ttgcacgga gaacctgccg 240
ctgctagagc cactgcgac ggtgccgac gtggggaacc cactggcgaa cctggttcaa 300
ccaaacttga aggtgattgt taacctgg      328
```

<210> 534

<211> 75

<212> DNA
<213> Mycobacterium tuberculosis

<400> 534
gcagaccaac aagatgcatac gggatcatac gccgtcaact acccggccaa cggtgatttc 60
ttggccgcgcg cccac 75

<210> 535
<211> 319
<212> DNA
<213> Mycobacterium tuberculosis

<400> 535
ctcaagcttg ccaaagagac ctcgccacc aagcnggacg cgaccgtcna ggtggcgatc 60
cggcttggcg tccaccgcg taaggcanac canatggttc gcggcacggt caacctgcc 120
cacggcactg gtaanactgc ccgcgtcgcg gtattcgcg ttggtgaaaa ggccgatgct 180
gccgttgccg cgggggcgga tgttgctcgg agtgacaatc tgatcganag gattcagggc 240
ggctggctgg aattcgatgc cgcgatcgcg acaccggatc agatggccaa agtcgggtcnc 300
atcgctcggg tgctgggtc 319

<210> 536
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 536
ccacggcgtg gatcaaggta ccggccggga tgttgcgcaa tggcagggtg ttgcccggct 60
tgatgtcggc gttagcgccg gattccacca catccccttg cgaaagtccg ttgggtgcaa 120
tgatgtagcg cttctcccca tcgagatagt ggagcaacgc aatccgtgcg gtacgggttcg 180
ggtcntactc gatgtgcgcg accttggcgt tgacaccatc tttgtcattg cggcgaaaagt 240
cgatcatccg gtaagcgcg ttatgaccgc cgcctttgtg ccgggtggta atccggccat 300
gcgcgttgcg tc 312

<210> 537
<211> 105
<212> DNA
<213> Mycobacterium tuberculosis

<400> 537
ggcggctgcg tcggcgagat gatcgcccgc tgccaccccg atccgtgcct cggtcagcgc 60
caacgtgctt tccggtccgc cgaccacat gtcgcatgcg ccgac 105

<210> 538
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 538
gcaatgcct tggcggtcgc cgggttgta cgggtgatca tcncgngcg gatgtcatn 60
cggcgcatth cgtcnaatcg ttcccgatg cccacctga cgatgtcctt catatggacc 120
acgccgatgg ccncgcgct notg 144

<210> 539
<211> 431
<212> DNA
<213> Mycobacterium tuberculosis

<400> 539
ccggctcgta tgttgtgtgg aattgtgagc ggataacaat ttcacacagg aaacagctat 60
gaccatgatt acgccaagct atttaggtga cactatagaa tactcaagct tccacatcgg 120
tatgccaaag cattgcgccg ctatcgattt cgcgctggca tcgccaaggt ggacttcttg 180
ctcagcgacg agatcccgtg gtcggatccg cggctgcggc gggctgcgac cctgcatctc 240
ggcggcaccc gtgaccagat ggcgcgcgcc gaggcagacg tcgcggcggg acgccacgcc 300
gactggccga tgggtgtggc cgcgtgtccg cacgtcgccg accccggccg catcgacgaa 360
accggccgcc gtccgttctg gacctatgcc cacgtgccgt cggggtccac gctcgacgcg 420
accgagaccg t 431

<210> 540
<211> 462
<212> DNA
<213> Mycobacterium tuberculosis

<400> 540
cgcgtccacc gcagcgtgag attggtggcg ccattcgtcg tgggtgtagct gctggtggcg 60
gcgtcgccgt attgtgcggg ccagccttgt gcgggggccc cttctaccca cgagtcggca 120
cttcgcgaac cgcccagctc gaccgcgatt acggcggccg caacggccgc cggaaggcgt 180
ctcgcaagcg ccttatacctt tcgcaggttc ccagatcctt ccgctacgtg ggtcgctcat 240
cggcggggccc ggccgaatga gtacaggtga gggtaaccgc taaaaatgaa gttggtcagt 300
gctggccaac tgtgtaatgg ttgcccggct cgggtcacca cgtacattct ggcaaggcgg 360
gcgagattcg gttcctcgcg tccttggccg gtggcggttc ccggttgtcc gtgggcgtgt 420
cgtgtacgtg gtgtaagtgt cgtgaactcc tcagtttggg ct 462

<210> 541
<211> 307
<212> DNA
<213> Mycobacterium tuberculosis

<400> 541
ctcaagcttg cgctggatct ggcggctgag cctgttcttg ggcaacatgc cgagggatcg 60
ccttttccac cacgcggtcg ggggtggcgtt gcattagctc accgatggtg cgcttgtgca 120
ggccgcgggg ataccccgag tgccggtaaa catcttcttg ctgcagtttg tcgccgctga 180
tggcgacctt gtcggcggtt atcacnatga cnaagtcacc gccatcgaca ttgggggcga 240
acgtcggctt gtgcttgccg cgcagcaggt tggccgccgc gacggcaagg cggccaanca 300
ccacgtc 307

<210> 542
<211> 333
<212> DNA
<213> Mycobacterium tuberculosis

<400> 542
tttgggatgg gcaaaaaggc gaagcncgcg gtggccacga acgccgggag ggacaatctc 60
gggcggctag ggcttctcgc gggaaggccc gaacgtacgg cgtttcaaca cgtcgcgtcg 120
ccctccgacc gcgaacattc ggggatggca gcaacctgg agcaccctgg ccgggcgatg 180
atctgcagcg tcgccgcggg tagtcgcgcg ccggggcggt acagtctgaa acgcgatgac 240
catcgatgtg tggatgcagc atccgacgca acggttccta cacggcgata tgttcgcctc 300

gctgcgccgg tggaccggtg ggtctatccc gga

333

<210> 543

<211> 234

<212> DNA

<213> Mycobacterium tuberculosis

<400> 543

```
ctcaagcttc gtcataagac catggtgcgc tttctttcac ccgtccanag tcgggggcat 60
ccgcaccggc tcgcatcgca tcctctctcc acgacgggcc gctcatcagc ttggggccatt 120
tcaatgtact tgataccccg cgctgcgggt aggccactgc nacaattcaa acacggtgtc 180
acacggtgaa tantgtcnan atgggctctg atcaaccgtc ncaaaccggc tttc 234
```

<210> 544

<211> 440

<212> DNA

<213> Mycobacterium tuberculosis

<400> 544

```
gaattctgcg tgcaccgcta tgggttgagc cagcggctgg cgccgcacac cccactggcc 60
cgggtgtttt cgccccgaac ccggatcatg gtgagcgaaa aggagattcg cctgttcgat 120
gctgggattc gccaccgcca ggccatcgac cgattactcg ccaccggggg gcgagagggt 180
ccgcagctcc gctccgtcga cgtctccgac gatccatccg gcttccgccc tcgggtggcg 240
gtagccgtcg atgaaatcgc tgccggccgc taccacaagg tgattctgtc ccgttgtgtc 300
gaagtgcctt tcgcgatcga ctttccgttg acctaccggc tggggcgctc gcacaacacc 360
ccggtgaggt cgtttttgtt gcagttgggc ggaatccgtg ctctgggtta cagccccgaa 420
ctcgtcncgg cgggtgcgcgc 440
```

<210> 545

<211> 425

<212> DNA

<213> Mycobacterium tuberculosis

<400> 545

```
gcagttggga atcgctctgc agcaaaccan tattctgcgc gacgttcgag aggactnttt 60
gaatggacgg atctacctgc cgcgcgacga gctggaccga ttaggcgtac ncctccgcct 120
ggacgactcc ggggcactcg atgaccccca cggacggctc gcggcactgc tgcggttcn 180
tgccnaccgc gccgcanact ggtattcgct gggactgcgg ctgattccac acctcgaccg 240
ccgcagcgct gcctgctgtg cggccatgtc tggcatctac cgccgtcngc tcgccttgat 300
cagaccatcg ccggcggtcg tctaccatcg gcgaatctct ctgttcggga ctgaanaang 360
cccaagtggc ggcggcagca ctggnctctt cggtaacctg cngaccgccc attggaccgc 420
taccg 425
```

<210> 546

<211> 401

<212> DNA

<213> Mycobacterium tuberculosis

<400> 546

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ttgatctgga cgtctgagac ggtgatcggn ccgaacctga attgtccggt aatgcccagc 60
gcagaaagca nggtggtggc cggggcggtg aanccggcgt cggcggcacc gtcgaagtcg 120
atgtggattg ccggaatggg gatgtccggc acggcggaagc cgtagttcgc ttgtcccgtg 180
aggcccangt ggatgggggg aaggatcgtg gtgtccggga tgataatggg gccgatgccg 240
```



```

ccggttgaag tccagtggat cgggaattcg ggaatcgtga tgccgacgtt caggccgaac 300
aggccctcca agttgcctcg ccacnagatg ccgttgctga agttgccga catgagggcg 360
ccggtgtcca cattgccga attggcgacg ccggtgttg c 401

```

```

<210> 547
<211> 391
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 547
cacgtaggcg ccgtccataa atnactccgc cgcgcttcgc acatcctcgt ancgatcctt 60
ggcgagcagg tcaaccgggc gctgcccgtc naggagccgg tttttggcgt gcagccactg 120
gccgacacct cggggggtaa gcgaatccga gagcaggagg acnaggtcac gaanctgcgc 180
cagccggtcg taccgctcag ggcggatgtc gccggtccgc caccgcgta ccgccgatc 240
ggacacctgt atgaccggcg cgacntcgac ctgggtgacg ccgaagggtt tcagggcatc 300
nacnatctcg ctggcctcga ccgcccggtc cagggtgacc gccatcgtgg ttctctcgca 360
acttccggtt ctactaccgt aaacgctacc g 391

```

```

<210> 548
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 548
cggggaacgg tcctcgca cctggttcgt gttgcgggaa ttactcggac ancaaaacgt 60
caagaactac gacggcagtn ggacagaana cggctccctg gtgggcgccc cgatcgagtt 120
gggaagctga tatgtgctct ggaccaagc aaggactgac attgccggcc agcgtcgacc 180
tgaaaaaaga aacgggtgat accggccgcg tagtggacgg tgacggccag gccgtgggcg 240
gcgcgtttcg tgcggctgct gggacnctc cgacgagttc accgccggga ggtcgtcgcg 300
tcggccaccg ggcgaatttc cggttcttcg ccgcgccccg ggatcctggg accgcnggcg 360
cgcgctggt 369

```

```

<210> 549
<211> 85
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 549
ctcaagcttt gtccgacaag cgttcccggg cggtcagcaa gcgaacgtcg gttggccca 60
tgcggtcgca tattgccgcc aggga 85

```

```

<210> 550
<211> 101
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 550
cgtcagcacg gcgacgtcgc gntacgccga gcagttacac aatcgctctg cagcaaacca 60
atattctgcg cgacgttcga gaggacttct tgattggact g 101

```

```

<210> 551
<211> 458

```

<212> DNA

<213> Mycobacterium tuberculosis

<400> 551

```
ctgcatccgg ctcgtatgtt gtgtggaatt gtgagcggat aacaatttca cacaggaaac 60
agctatgacc atgattacgc caagctatth aggtgacact atagaatact caagcttcgc 120
gcagcggcgg gttgacccgg ttcacgccgt catagctggc caatctggca tcgtcgatca 180
ncatgtggtg ggggggtgacc tcggcgggtga tcgaaatacc ctggtcctta tcccatttca 240
ggatttcgac ggtgcccgcg gccgacgcgt gacagatgtg cacccgggcg ccggcgtcac 300
gggccagcaa ggcgtcgcgg gcgacgatcg attcctcggc ggcccgcggc catcccgcc 360
ggcccagccg cgcgcgcatg ggtccctcgt gcgcgacggc gccgaccgtc agccgggggt 420
cctcggcggtg ctgggcgatc agcacgcccc aaccgggtg 458
```

<210> 552

<211> 463

<212> DNA

<213> Mycobacterium tuberculosis

<400> 552

```
ccgacgcgca ctacgtgctg gtgtccaccc gcgacccgca ccggcacgag ctacgcagct 60
accgcatcgt cgatggcgct gtcaccgagg aacctgtcaa tgctcgtcag cagtactgaa 120
ccgttcggag aaaggccagc atgaacgtca ccgtatccat tccgaccatc ctgcgggccc 180
acaccggcgg ccagaagagt gtctcggcca gcggcgatac cttgggtgcc gtcatacagc 240
acctggaggc cagctattcg ggcatttccg agcgcctgat ggaccgctct tcccaggtta 300
agttgcaccg cttcgtgaac atctacgtca acgacgaaga cgtgcgggtc tccggcgggt 360
tgccaccgc gatcgtgac ggtgactcgg tcaccatcct ccccgccgtg gccgggtgggt 420
gagcggacac atgacacgat acgactcact gttgcatgcc ttg 463
```

<210> 553

<211> 453

<212> DNA

<213> Mycobacterium tuberculosis

<400> 553

```
tgcttcgggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattht ggtgacacta tagaatactc aagcttgccg 120
ggagggtgca tggccgactc ggatttacc accaaggggc gccaacgcgg tgtccgcgcc 180
gtcgagctga acgttgctgc ccgcctggag aacctggcgc tgctgcgcac cctggtcggc 240
gccatcggca ctttcgagga cctggatttc gacgccgtgg ccgacctgag gttggcgggt 300
gacgangtgt gcaccgggtt gattcgctcg gccttgccgg atgccaccct gcgcctggtg 360
gtcgatccgc gaaaagacga agttgtggtg gaggttctg ctgcctgcga caccacgac 420
gtggtggcac gggcagcttt agctggcatt cct 453
```

<210> 554

<211> 466

<212> DNA

<213> Mycobacterium tuberculosis

<400> 554

```
ggaaacaccg ncgcgctcgt ggccaccaac accgcgacca gcaccgtgac ccggaccggg 60
gtgccgcgcg aaccgggtctt ggccaattgc cgcggcacca agccgtcgcg cgccatggcg 120
aacagcacgc ggcattgccc gagcatcaac accatcacca ccgtggttaag cccggccagc 180
gcgccgacgg agatgatgcc gctggcccag tacaccccggt tggcctggaa cgcgggtggc 240
agatttgccg gcccgcggcc cggtagggtc cgcagttggg tgtatggaac catgcccagc 300
```

```

agcaccaccg ataccgcgac gtagagaagg gtcacgaccc ccagcgacgc gagaatccct 360
cgaggggacgt ctcgttgagg acgcttggtc tcctcggcca tggtaggcac gatgtcaaac 420
ccgataaacg cgaagaacac gatcgatgcc cggccagcac gccgta 466

```

```

<210> 555
<211> 466
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 555
cctgcttccg gctcgtatgt tgtgtggaat tgtgagcggg taacaatttc acacaggaaa 60
cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac tcaagcttgt 120
cctcgggctg ggcctcggcc aagaaatcgt cgacgcggc ctctgtgca atcgcttgg 180
cggtcgcggg gttgtcaccg gtgatcatca cggtcgggat gctcattcgg cgcatttcgt 240
cgaagcgttc ccgatgccc accttgacga tgtccttcag atggacgacg ccgatggccc 300
gcgcgctgct gttatcggtc cattccgcaa cgactagggg tgtccccccg ccggagctga 360
tgccgtcgac aatggcaccg acctcctcag tgggggtggc accgtgatcg caaaaccact 420
tcatcaccgc agccgcggca ccttgcggat ccgaacggat gcgctc 466

```

```

<210> 556
<211> 467
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 556
ttcgttcgat ggcgcgcgcc cggctacggt ttgacctgtg ggtgtcgaat tgggggtcaaa 60
ttccgaggtc ggcgcgctaa gagtggatcat cctgcaccgc ccgggggccc aactgcgccg 120
gtcacaccg cgcaacaccg accagctgct gttcgacggc ctgccctggg tatcccgcgc 180
gcatgacgag cagcagcaat tcgccgagct gctggcttcc cgcggtgcgg aagtgcgtgt 240
gctgtcggac ctggtgactg aggcactaca tcacagcggg gccgcccgcg tgcaggggat 300
cgccgctgcc gtcgacgcac cgcggctggg actgccgctg gcgcaagaac ttctggccta 360
cctgcgtatc tcgacccaag cangttggcg catgtgctga cgcggcatg acttcaacga 420
actccntcc gacacgccga acgaagtgtc gttggtgttg cgtatgc 467

```

```

<210> 557
<211> 142
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 557
gcggcgagtg tggtaggtgc cgaacacgaa tccaacgacg cactggcgga gagataccac 60
ttgctgtact ggaagcacgt gctgatgacg tcccgtagaa tgtgcctcgc cgccgtctat 120
cgaaaacagt gagcatgctg cg 142

```

```

<210> 558
<211> 217
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 558
caaccgcgct cggcgcgtct gggccttccg ccggctccgc cgacaattct atctctggat 60
cagcggggct ctccgggccc gcctccgcga actcaacagg ccgcgccttc cggccgaaac 120
attccctagc catatatgat cgcacctcga tacacgatct ggcggcaaca ccgcaaagcg 180

```

tccgacgggc ccaacctccg caattcaggt atccggg 217

<210> 559
<211> 147
<212> DNA
<213> Mycobacterium tuberculosis

<400> 559
gaaggtcggc gaaggtgtgg ctggntgccg atcacgaatc caatgatgca gtggtcggaa 60
gatattagcc acttgctgtt ctggagacag gtgctgatga tctcccgtgg aatgtccctc 120
gactccgtct atcgaaatct gtgaaca 147

<210> 560
<211> 177
<212> DNA
<213> Mycobacterium tuberculosis

<400> 560
tcttgcgtc tgggccattc tcgggtctgc cgacaattct atctctggat ctgtggggct 60
ctcttggccg gcctcngcga tctcttcang gcgcgccttc cggccgaaac attccctatc 120
catatatgat cgcacctcta tacaccgttt ggcggcaaca ccgcaaagtg tctgtcg 177

<210> 561
<211> 128
<212> DNA
<213> Mycobacterium tuberculosis

<400> 561
agctttacgc tggcgtatca gcgttggggc cgctgccatt tcggtcgccc aacgcgttgc 60
cagctccctg cgctgtcagg gcttgcgcgc caaactggcc accgcaacaa acttggtgta 120
gcttgatc 128

<210> 562
<211> 142
<212> DNA
<213> Mycobacterium tuberculosis

<400> 562
ctctatctgg cgtcacattc gcaatcttta gattgcagat atcgataaaa tcacccgcgc 60
gacaagaccg ccatgtcatc ctttcgatgt tatttcgccg gcctggggaa agcgcaacga 120
cgttgccctac acgttccgcc gt 142

<210> 563
<211> 406
<212> DNA
<213> Mycobacterium tuberculosis

<400> 563
agctttncct tgcattctgca ccccgatcca cgtcagccac gtccggcggtc tccaccaaga 60
agttgcgggc atttctcctt ccttggccga gctgctcgcc ctctgtaggtg aaccaggcac 120
ccgacttgcg gatgaggccc tgatccacac ccatgtcgat cagcgagccc tccctgctga 180
ttcccttgcc gtagaggatg tcgaactcgg cctgcttgaa ggggggcgaa cagttgtgca 240

```

cgacaacccc ttcggcgacg aggggtgtgca gttcctcgac ctcgaggtcg aacgttcgtg 300
cccgccgcgt tggcagcact tctcggatca cggaatagcg ganttcctcc gccagcatgt 360
cgtgcaggaa tttgtcatcc agggcatccg cgagcgcctg cacgcg 406

```

```

<210> 564
<211> 311
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 564
actgtcnagg gaatgcttcg cagcatctac ctgcagtcgc ttgtgcataa gcggacggcc 60
cnacctgttc gtgttcctgg acaccagacg cgggagcacc ggcagtacgg cgaaagggtt 120
gagcggaaag agttgcgcaa atcggggcgc cccaacaccc gtccgcaaga cgcggtcaac 180
gacctgtttc aggcgatcag ggtcaccgac tcacctgcac tgagaacaag cgatctgctg 240
atctgccaga agatggacat gaatgtccac ggcaagcctg atggcctgcc gctcttcctg 300
gaatgttttg c 311

```

```

<210> 565
<211> 310
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 565
tgaattatga tcccgaacac actgcatcan tttagccgcg tcgngatgct atccgccgac 60
ggttttganc nggtccgtgt cgttcgtggt gatctcacc gaagttgtgt ccgccgccgc 120
cggggatcta gcgaacgttg gatcgacaat cagcgccgcc aacaaggcgg cagcggtctg 180
gaccacgcag gtgctggccg cgggcgccga tnaggtgtca gcgcgcacg cggcgtgtt 240
tggtatgtac ggcctgnaat atccggcgat cagtgcgcaa gttgccgcgt atcaccanca 300
gtccgtgcag 310

```

```

<210> 566
<211> 326
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 566
aacggggacc ncaagaaacc attcaanaac gaggggtcgt caccaacgtc gaaaccgacg 60
gttgccagcc ggcccacgat attgctgtgt cgagggtccg ctgtaccctc accgaacgtg 120
agtccacac cgcgaggcg ggcgactctg gcgtcgttag cagccgagct caagggtgtc 180
cgcaccactg tctcgaatgc ttttaaccga ccgatcagc tctccgccga tctacgtgaa 240
cgagtgttg ccacggccaa ggcactgggc tatgccggac cggatccggt ggcgcgatcg 300
ttgcggaccc gcaaagccgg tgcggt 326

```

```

<210> 567
<211> 374
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 567
agctttggag ccncnccgan ccncgggtac gcccgcgcac cgccgtaccc ggcacccgac 60
ccctttgagc cgttcgccgt ggccgcgggtg ganctggccg acgagggact gatcgtgctg 120
ggcaaagtgg tcgatggcac gctggccgcc gatctgaagg tcggcatgga gatggagctg 180
acgaccatgc cgctgttcgc cgacnacgac ggtgtgcagc gcacgtctta cgcgtggcgg 240

```

```

atcccatcgc ggcgcggcga cnatgcanag cgcancgatg ctgaggagcg ggcccgatga 300
ggatgagcgc gccggaaccc gtttacntcc tgggtgccgg tatgcacccg tgggggaaat 360
ggggtaatga cttc                                     374

```

```

<210> 568
<211> 422
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 568
ttctcncatc gttcgtactn ngatgggacg ctgctgcccg aggcgatcct ggccaaccgg 60
ctctcgccgg cgctgacctt cggcggggcg aacctgaact tctttccgat gggcgcttgg 120
gccaaacgta ccggggctat cttcattcgg cgtcagacga aagatattcc cgtctaccgc 180
ttcgtattac gtgcttacgc cgcgcagctg gtgcaaaacc atgtcaacct cacctggtcg 240
atcgaagggg gtcggaccag aacgggcaag ctacggccac cgggtgttcg gatcctgcgt 300
tacatcaccc atgcggtcga cgaaatcgac ggtcccgaag tgtatttggg gccgacctcg 360
atcgtgtacg aacagctgca cgaagtggaa gccatgacca ccgaagccta tggcgccgtg 420
aa                                                    422

```

```

<210> 569
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 569
ttcttcgggg taccgctgat cggcggcacc atcacgcacc cgggtgcagg cgaggcggcc 60
gccggtgtgg tgttgctacg gccgggccag cggggtaccg gtgtgatcgc cggtggtgcg 120
gcccgcgccg tgctggaatg tgcgggggtg cacgacatct tggccaagtc gctgggcagt 180
gacaacgcga tcaatgtggt gcacgccacc gtggccgcgc tcaagctgct gcaccgtccg 240
gaggaggtgg cggcgcgccg cggtttgcca atagaagacg tccccccggc cgggatgctg 300

```

```

<210> 570
<211> 343
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 570
gtcgaaagtg accatctcta ccttgagtgc cataccgccc gaccctatgc ctcggatagc 60
tcggcggaag gaaacgcttg cagtgccgcc gaataggcgg ctacgtcgtg agcgcccatc 120
aactctcgcg cggagtgcac cgccagctgg gcgcgccga cgtcgaccgt ggggattccg 180
gtgcgcgcgg cggccaacgg cccgatcgtc gaccgcacg gcagatcggc gcgatgttcg 240
taacgctgca taggcactcc cgcgcgctgg caggccagtt gcgaaacgcc cccgccgggt 300
gccttcgcgc ggttggcttt accgcaaatt tggggttgcc cct                                     343

```

```

<210> 571
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 571
aaagccacgg aaacgattgc ctactgccga atcggggaac ggtcctcgca cacctgggtc 60
gtgttgccgg aattactcgg acacaaaaac gtcaagaact acgacggcag ttggacagaa 120
tacggctccc tgggtgggcgc cccgatcgag ttgggaaact gatatgtgct ctggacccaa 180

```

gcaaggactg acattgccgg ccagcgtcta cctggaaaaa

220

<210> 572

<211> 254

<212> DNA

<213> Mycobacterium tuberculosis

<400> 572

tttcgccacc	gcnaggctcgt	gcgcggttcca	gaaaagcgtg	gtttcgccgg	gcgcgaggat	60
tcgacgggtcc	aactgaccag	ccgggtcccgc	caccgcgttag	gcaggatcgc	ggtgtctata	120
tggttcgcct	cggcataaac	gccattgctg	cggtgaaaat	cggacatctc	gccgattgcc	180
acgtctacat	gatccgcttt	gtcccgcgcc	gggtcgttga	caaacgcgat	gtcngcctcc	240
tggaagcgg	tggc					254

<210> 573

<211> 329

<212> DNA

<213> Mycobacterium tuberculosis

<400> 573

tcgccaaagt	gattcgtgct	caccnacgag	atccgtggtc	ggatccgcng	ctgcggcggg	60
ctgcgaccct	gcatctcggc	ggcaccgcgt	accaaattggc	gcgcgcggaa	gcagacgtct	120
cggcgggacg	ccacgccgac	tgcccgatgg	tgctggccgc	gtgtccgcnc	gtcnccgacc	180
ccggccgcgt	cnaccaaacc	ggccgcgcgt	cgttctggac	ctatcccacg	tgccntcggg	240
gtccacgctc	gacgcgaccg	anaacgtaac	cagcgtcctc	gancggttcg	cccccggtt	300
ccgtgacatc	gtggtggcgg	ccgcgcgcgt				329

<210> 574

<211> 297

<212> DNA

<213> Mycobacterium tuberculosis

<400> 574

gtaccgtcac	catgatcgcc	cccatcgcca	tcggtgagct	gatagatccc	agccggtttc	60
gccaaacccg	gagcgatctt	ggcgcgcgtc	tngtngtcnc	tganaentag	ccaccaacag	120
agcccggtgt	gcgacaagan	gactgatcgg	atctctccgg	acacntcgag	ggggtcntca	180
ggagnccggg	cgccaccccg	aggtgaagct	ccgcccagcc	tcacaccgcg	accgggtatc	240
ncaagtgcg	caataanccc	accacctcct	cggacccccc	gttgatgctg	gctgggt	297

<210> 575

<211> 401

<212> DNA

<213> Mycobacterium tuberculosis

<400> 575

atactcaagc	ttagacctca	ctgatgtggc	gggacgcggg	agataaccgc	ggttcgagcc	60
gttcaacagt	ggtgggtccc	acaccagttg	tttgcccttg	cgaagtaaag	cgattcgatt	120
tgctcgaaaa	gagggtcggc	tgctcgtgag	ggacatccat	ggccgatacc	tcagcgatct	180
caacgggtcaa	gcgactgcat	gtttggcgca	aggtatcgct	aagcataggt	tcgtgacgga	240
tttgacagca	agagctttcc	aaagattgct	gtccacatan	tgattcgcat	ctctacacct	300
cttcgcgcgt	gctgtcaaga	gccattcgaa	tcagttatct	cgctcgtgct	tggaanaaat	360
tttcccagcc	tgcgttggac	aaaccgcgtc	gccaaagcgg	t		401

<210> 576
<211> 453
<212> DNA
<213> Mycobacterium tuberculosis

<400> 576
agcttcccga gaaacagtgc attccctaag cagcccgttg tcacgccgat gagtgaagag 60
tgcacgcaat cgccggaatc cggcaaagcc ctgcacaagc gaaatcaacc cggaggctga 120
caaggcaacg tcggtgatcc gtaccgcctg gttggacaaa cggcagaagg cggcctcgtc 180
cggctccatct acgccgagca cactgggtgat agcgcgcata ggcatacggg cggccacggg 240
ggagacgacg tccgcgggcg tctgggtcag taaccgcgcg accagttctc gggcaagctg 300
gtcgaccatac gggcgccacg tctccaacgc gccacgcgcc atacctggg cagttgctt 360
gcgcataccg gtgtgcgcgc gcggatcgga cgtcgcagaa acgcagccac cccgtgagaa 420
gtgaccacg gcgctggaca cgtgtctggt tac 453

<210> 577
<211> 474
<212> DNA
<213> Mycobacterium tuberculosis

<400> 577
cggccgggat gtgcgcaatg gcaggttgct gcccggttg atgtcggcgt tagcgccgga 60
ttccaccaca tccccttgcg aaagtccgtt ggggtgcaatg atgtancgt tctccccatc 120
gagatagtgg agcaacgcaa tccgtgcggt acggttcggg tcgtactcga tgtgcgcgac 180
cttggcggtg acaccatctt tgtcatggcg gcgaaagtcg atcatccggt aagcgcgctt 240
atgaccgccg cctttgtgcc nggtggtaat cgggccatgc gcgttgcgtc caccgcgacc 300
gtgcagcggg cgcaccagcg acntctccgg ggttgaccgg gtgatctcgg cgaaatcaga 360
tacgctggcg ccgcgacgac caggcgctcg gggcttgtag ttgcgaattg ccatggtcta 420
atcaggtctt tctctcacct ctcgctcgcg ggctagggcg cattgcctgc tcct 474

<210> 578
<211> 357
<212> DNA
<213> Mycobacterium tuberculosis

<400> 578
tagcgggtgta accaactccc gggtcaccac ccgcaaacct cttgcggcaa cagcaccgtc 60
gacgcgtcaa ccggggtgcc cggaatcctg tggatgggca tcgagtgcac ggtcacgacg 120
tccccgacgc ggccggtggc aacgacaagt ggcccgatg caccacaaat gacggccgca 180
caccggtggg gacggccagc acgagagccg tgtcgccgaa gtcgacgcta atgccgtagg 240
cattggccgt cacaacaggc gacgccccgc gtaccaccga gtccacggng gttgggcggt 300
ctcctcggcc aaccaggcgt gaaccgggcg gatccgaatg cagcaagacc cgtgggc 357

<210> 579
<211> 269
<212> DNA
<213> Mycobacterium tuberculosis

<400> 579
ccattggctg gtgtgcgcat accantaana cgcgcggggc acctgacgcg gcggccgcaa 60
ccattcgggtg gccatcgcca tcgtctgcca cccgggtcaac ggacgcacct tctcctggcc 120
gacctagtgc gccacccgcg cgcggttgcg tccatcgat ccgggtcaaca tgagcagcgc 180
caacaccgag cgggtacatga catctgctgt ggaaccagtg acanattccg ccgcccata 240

tgatcntcga ccgtcctccg gattcggtc

269

<210> 580

<211> 272

<212> DNA

<213> Mycobacterium tuberculosis

<400> 580

gccggcctgg	tcaaaggggc	gtccgaagga	nccgggctgg	gtaacaagtt	cctgggtcat	60
atccgcgaat	gcgacgccat	ttgtcaggtg	gtgcgggtgt	tcgtcgacga	cnacgtgact	120
catgtcaccg	gacgggtcga	tccccagtcc	gacattgagg	tcgtcgagac	cgagctgac	180
ctggcagatc	tgcaaaccct	ggagcgggcc	acgggcccgc	tggagaanga	agcncgcacc	240
aacaaggcgc	gcaagccggt	ctacgacccg	gc			272

<210> 581

<211> 373

<212> DNA

<213> Mycobacterium tuberculosis

<400> 581

gatccactga	ccacgatgac	atatcgaaat	gctcgacgat	tccgatggcg	atcaaggcca	60
cgatgccctg	gccgttgggc	ggtatctggt	ggatgggtga	cccgcggtag	gttcccgtga	120
tcgtgtcgac	ccagtccacg	cgatgggcgg	cgaggtcgtc	ggcacgcac	accccgccgt	180
ntgccgccga	gtgcgcctcg	agtttggcgg	ccagctctcc	ccggtagaac	tctcaccgtt	240
ggtcgccgcg	atcttctcta	ncgtcgccgc	gtggtcagga	aaggtaaaca	gctcaccggg	300
tttcggcgct	cgtccgccgg	gcatgaacgc	atctgcgaat	ccgggctggg	atgcgaacaa	360
cggacctgtg	ccg					373

<210> 582

<211> 314

<212> DNA

<213> Mycobacterium tuberculosis

<400> 582

tctactgccg	aatcggggaa	cggtcctcgc	ccaccngggt	cgtgttgccg	gaattactca	60
ggacaccgaa	acgtcgagaa	ctacgagcgg	agttggacan	aataccgctc	ccnggtgggc	120
gcccccatcg	anttgggaag	cngaaatgtg	ctctggaccc	caccaagaa	tgacattgcc	180
ggccgccctc	caactggaaa	tagaaacngt	gatcaccgcg	cgcgttcttg	gaagggaatg	240
catgccctgg	gccgggcggt	ccttcgcgtg	ccggactcct	cccaccaatt	caccgccgaa	300
ggcgtcccgt	ctgc					314

<210> 583

<211> 135

<212> DNA

<213> Mycobacterium tuberculosis

<400> 583

atactcaagc	ttctgtcacc	gaaatcccgc	atgggataac	gggttttagat	ttcgacaacg	60
ggaccgtggt	tctcaacaag	ccggatcatca	gctggggccg	cgacaacggt	atctacttca	120
cccgttttcg	cccgt					135

<210> 584

<211> 221
<212> DNA
<213> Mycobacterium tuberculosis

<400> 584
ctggctcaag cgctcggcgc gcaggtgaac tcggaccggc tcgacgtcgc cgaacgcgag 60
gcggtgctgg cccacgccga cgccgtcgtc gcacatatcg gcaccgtgca caagtctaca 120
acaacgccgg catcgcgtag aacggcaacg tcgacaagtc ggagttcaag gacatcgagc 180
gcatcatcga cgtcgacttc tggggcgtcc tccacgggcc c 221

<210> 585
<211> 70
<212> DNA
<213> Mycobacterium tuberculosis

<400> 585
ccgccctccg cattatgggt caagaacccat cgggtcggac ttctgggctt ccaacgctcg 60
cgccgtcccn 70

<210> 586
<211> 241
<212> DNA
<213> Mycobacterium tuberculosis

<400> 586
ccgtggcact gtcagacata tgccgcgtc ctctcatcg ctgcgctcgg catcgctgcc 60
ggcggatcatg gcgtcaccct acccaagccg aacgcgaaac gagaacgtgt tccattatta 120
gggtgtgagc accaatacca gattgctcac caggaactca cgcagcaccg ggacggatgt 180
cggccaccac gcccatctgg ggtggttagcg gggaaatacc gctaacgcgg ctccggtgcc 240
g 241

<210> 587
<211> 492
<212> DNA
<213> Mycobacterium tuberculosis

<400> 587
tactcaagct tgtccaaata tcgaagcgtc gggtcgagc gctcgggtcgg cagctccagc 60
aaaacccgct ccaccacctag atgccggtat ccctcaaggt ctttatccgc cgcttcaccc 120
cactggcaca cggtcaccgg cagctcgccc ccggccatgg cgcgcaaccg ctgaagcggg 180
cccgcagacc gctgcgggtga tggactgac gcgatccacc cggcattgag ccgggctatc 240
cgcggggaagt tcgccgggtcc cccgcccaaca tacagcggag gatagggctt tgtcaccggc 300
ttcggccagc agtagatcgg atcgaagtcc acatatgtcc catggaattc cgcctgctcc 360
tgcgttcaga tctcgattat cgcgcgcaac cgctcatcga tcacacgtcc gcgcaccgca 420
gggtccacac catggttggc gacttcttcg cgcaaccagc cacaccacg ccgaaacgaa 480
accgtccctg cg 492

<210> 588
<211> 313
<212> DNA
<213> Mycobacterium tuberculosis

<400> 588

caggcatgca	agcttggcca	actcctcatc	ggacttgaag	gtgccgtcct	cgttggcggc	60
cctgctccac	ggcacgttga	tggcaccagg	aatgtgtccg	ggccgctggc	tttgttcctg	120
cggcaggtgc	gcgggggcca	ggatcttgcc	ggagaactcg	tcgggagagc	gcacgtcgat	180
gaggttcttg	acgttgatgg	ccgccaggac	ctcgtcgcgg	aatgcccga	tcgtgttatc	240
cggcggggan	gcggtgtagg	aagtcaccgg	ccggctgacc	gggtcgctgg	acagcgggcg	300
tccgtcgagc	tcc					313

<210> 589
 <211> 305
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 589						
atactcaagc	ttcaaaacag	gcctgttgtg	ggcgcacccg	gctcgccgag	ttctgcacgc	60
accgcctcaa	gtgcggcccg	caccgcccgc	atctcccggg	cacgcagggc	cgcgcccgcg	120
gccgcagcga	cggcgtgttc	gcgcagttcg	ccgtcaatga	tgctgacctg	atcgcccacc	180
cgggcggtct	cggcgtcgtc	ccgttcaacta	atcgcggtgc	tcagcagcgt	ctcgacagcc	240
accacccgag	tggagaccag	atgcnccacc	acggaccgca	gcgatgccag	tcacctcacc	300
cgtcc						305

<210> 590
 <211> 394
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 590						
caggcatgca	agctttgcag	ttgctgagta	atgtcggcca	acgtcaccac	aatcgcgatg	60
aattcaatca	tgccgcccag	ggcggccaac	ccaatggtgg	ccgcgagcgg	cagctcgatc	120
gcagcgcgga	ggttgccggc	cgccagttga	ttcacgaaca	gggtgaggtc	ataggcgggc	180
aggatagtga	cgaaggcaag	acctagatct	gccgtcggaa	gaagaatcga	gtatccggtc	240
gacacaacgg	aagcgaaagt	gtccgcgatg	ttgatgagcg	tcgccggttg	tggcggcggt	300
ggcggcggtg	gcaccgtccg	cacataccgc	gggaacgcgg	gcatccgaat	ttggggcagg	360
gtgttcaagg	cggctggcaa	ctcaccatga	atct			394

<210> 591
 <211> 457
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 591						
ccggctcgta	tgttgtgtgg	aattgtgacc	ggataacaat	ttcacacagg	aaacagctat	60
gaccatgatt	acgccaagct	atcttaggtga	cactatagaa	tactcaagct	tggccgcagg	120
gccgagtcga	ttggtcgcgg	tcgcctcgac	agttagctta	tgcaatgcta	acttcggggc	180
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cgtgatgaca	ttggcatggg	ggccgcttcc	cccgtcgcgt	ctcgggtaaa	tggcaaggta	300
gacgctgacg	tcgtcgggtcg	atctgccacc	tgctgcccgtg	ccctgggcat	cgcgggtttac	360
cagcgtaaac	gtccgcggga	cctggctgcc	gcccgggtctg	gtttcgccgc	gctgacccgc	420
gtcgcccatg	acagtgcgac	cctgnaccgg	gctgggcc			457

<210> 592
 <211> 438
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 592
gtgtgctgtc aattcagagc tgagcctgat gcactcaact tactgagcat gctaacgctg 60
gtcgtgcggg tcttgttccc gcgtgtcggc agggcacacg ctcgggggt agctgggaga 120
ggccccggtc aagcccggag agcagtgtc agtccgccag cttgaccgac tttcgatgag 180
aacgcgttc tcgccgtatt gaactggcgt gctgacggtc gctgagcagc gctcgccgag 240
tgcgggcgct gattctttca tcgagccagg aggcgcattc gtgttcggcc gcctgcgggt 300
cggccccatc gtcgacgcga tccgtcacc actcctcgat caggtctgcc tcatcgaacg 360
ggccaacggt gctgtcggag taagtgtgcg tgggcacgcg agccgggtgc tgtggtacac 420
ccaccgttc atgaacaa 438

<210> 593
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

<400> 593
atactcaagc ttcaccaggc gccggcgggc cgcggcgcca agccaggcag ccgcgctcgg 60
cgcgtcgggg ccttcgcgcg gctcggccga cagttcgatc tctggatcgg cggggctctc 120
cgggccccgc tcggcgacct cagcggggcg cgccttcgg ccgaaccatt ccctagccat 180
agataaccgc acctcaatgc acggtttggc ggcaaccgg 220

<210> 594
<211> 266
<212> DNA
<213> Mycobacterium tuberculosis

<400> 594
agcttcgctc acgacccgcc ctgcgccgtg ccggcgccat cggtcacggt atctcatgac 60
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gtgactgagc tggccgagct ggaccggttc accgcggaac taccgttctc gtcgacgac 180
tttcagcagc gggcttgagc cgcgctggaa cgcggccacg gtgttgctgg tgtgcgcgcc 240
gaccggcgct ggcaagacgg tggtcg 266

<210> 595
<211> 105
<212> DNA
<213> Mycobacterium tuberculosis

<400> 595
atactcaagc ttgccgggac cgcggaacag aaccggcggt tcctaccgag gtgtgcggcc 60
ggcgcgatat cggcctccc actaaccgaa cccgatgtgg gctcc 105

<210> 596
<211> 141
<212> DNA
<213> Mycobacterium tuberculosis

<400> 596
acgtttggctc tgccggaacg tatttccagc ggcacgcatt cggcgtgggt gccgggcgcc 60
gagttgcgtc gctgggatca cgcagcagtc gccggcggt gccgtcgggc tatgaattgc 120
accgagccgg aaaatcnca c 141

<210> 597
<211> 234
<212> DNA
<213> Mycobacterium tuberculosis

<400> 597
atactcaagc ttgtcgtatt ccgtggcact gtcagacata tgcgccgctc ctccatcatcg 60
ctgcgctcgg catcgctcgcc ggccggtcatg gcgtcaccct acccaagccg aacgcgaaac 120
gagaacgtgt tccattatta ggggtgtgagc accaatacca gattgctcac caggaactca 180
cgcagcaccg ggacggatgt cagccaccac ccccatctgg ggtggtagcg ggga 234

<210> 598
<211> 184
<212> DNA
<213> Mycobacterium tuberculosis

<400> 598
cgttggtagc ccgatatgca tagtgtatct tactgaacat gatttccatt atggagcccg 60
gggtgccggc agcgcgaacg gtgcgccgctc agacgcgggc ggactgacc aggggtgttc 120
gggcgaacat cggcccggct tcggattccg gtccgggtac cgggcgaccc accgcttcga 180
ggta 184

<210> 599
<211> 351
<212> DNA
<213> Mycobacterium tuberculosis

<400> 599
atactcaagc ttggccaact cctcatcgga cttgaagggtg ccgtccctcgt tggcggccct 60
gctccacggc acgttgatgg caccaggaat gtgtccgggc cgctggcttt gttcctgcgg 120
caggtgcgcg ggggccatga tcttgccgga aaactcgctc ggagagcgca cgtcgatgag 180
gttcttgacg ttgatggccg ccaggacctc gtcgcggaat gcccgaaatcg tgttatccgg 240
cggggaggcg gtgtatgagg tcaccggccg gctgaccggg tcgctggaca gcgggcgtcc 300
gtccagctcc cacttcttgc gggcgccgctc caacnacttg acttctcctg g 351

<210> 600
<211> 438
<212> DNA
<213> Mycobacterium tuberculosis

<400> 600
atatcttaag cgtcgggtcc cgaggctcgg tcggcagctc cagcaaaacc cgctccaccc 60
ctagatgccg gtatccctca aggtctttag ccgccgcttc accccactgg cacacgggtca 120
ccggcacgtc gccccgggcc atggcgcgca accgctgaag cggaccgcac agccgctgcg 180
gtgatggact gatcgcgatc caccggcat tgagccgggc tatccgcggg aagttcgccg 240
gtccccgcgc cacatacagc ggaggatagg gctttgtcac cggcttcggc cagcagtaga 300
tcggatcgaa gtccacatat gtcccatgga attccgcctg ctccctgcgtc cagatctcga 360
ttatcgcgcg caaccgctca tcgatcacac gtccgcgcac cgcagggtcc acaccatggt 420
tggcgacttc ttcgcgca 438

<210> 601
<211> 410

<212> DNA

<213> Mycobacterium tuberculosis

<400> 601

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cacacttctt tgcggttcgg tgatctcgac accggccgcg agccgaccac catgcgcgcg 120
taaatcggcg atcagcgcgt cggctatcgc ctgggtgccg cccaccggaa tcggccagcc 180
gaccgaatgg gccagcgttg ccagcatcag tccggcgccg gccgacacca gtgacggcaa 240
cggtgaaatc gcgtggggcg caacgccggt gaacaacgcg cgggcatcct cggccgccag 300
cgaccgccag gcaggggtgc cctgggccag catccgcagc ccgagacgca ggaccgagcc 360
cagtgcagta ggcaaagacc gcttgtcgga gacatgaact ccacgaccgt 410
```

<210> 602

<211> 456

<212> DNA

<213> Mycobacterium tuberculosis

<400> 602

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agcttattga accgcgggtc gcaggcaaag tggacctcat aacgactcgg gtccagcgac 60
cgcgccaaca cgaacggccg gacgacgtgg gccagggtcg cggcctcccc taaaaacagg 120
atccgttgcc tgcgagcgac aggtctcgggt gcggcggttg gcgccgtgct cgtcccagcg 180
tccggtcccc ggtcgccggc gacgcttggt tcctccatac tcgcccccta atctcgaggc 240
agcccgatcc cgcaggcaac ctcccaaaaa tgcaatcccc caaaatgcaa tgcgtcgagc 300
tatttctcac accgaccgct agttgcggat cagaaatccg ttggggcgcg aagtccagcc 360
gaatttggtc tcccgcctcg catcatgctt gtaatcgttt ggaaattcat cctcatatgc 420
ctcgatcgct tcatagggtc caggccaaac cgggca 456
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<210> 603

<211> 217

<212> DNA

<213> Mycobacterium tuberculosis

<400> 603

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cttccggctc gtatgttgtg tggattgtg agcggataac aatttcacac aggaaacagc 60
tatgaccatg attacgcaa gctatttagg tgacactata gaatactcaa gcttggccac 120
ctcgcggtgt gtggtggaac ccatctgagc agtgtgccaa accggggcag acagctccca 180
attgacgtga gcccgcctac ttgctgggta agcgtcg 217
```

<210> 604

<211> 478

<212> DNA

<213> Mycobacterium tuberculosis

<400> 604

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tagcgcctccc tcccggggcg agctccacgg cgtggatcaa ggtaccggcc gggatgttgc 60
gcaatggcag gttgttgccc ggcttgatgt cggcgttagc gccggattcc accacatccc 120
cttgcgaaag tccgttgggt gcaatgatgt agcgcttctc cccatcgaga tagtggagca 180
acgcaatccg tgcggtacgg ttcgggtcgt actcgatgtg cgcgaccttg gcgttgacac 240
catctttgtc attgcggcga aagtcgatca tccggtaagc gcgcttatga ccgccgcctt 300
tgtgccgggt ggtaatccgg ccatgcgcgt tgcgtccacc gcgaccgtgc agcgggcgca 360
ccagcgactt ctccggggtt gaccgggtga tctcggcgaa atcagatacg ctggcgccgc 420
gacgaccaag cgtcgtgggc ttgttcttgc gaattgcatg tctaatacagg tctttctc 478
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<210> 605
<211> 459
<212> DNA
<213> Mycobacterium tuberculosis

<400> 605
tgaaactata taataactcaa gcttgccaaa gaagacctcg tcgaccaagc aggacgcgac 60
cgctcgaggtg gcgatccggc ttggcgctga cccgcgtaag gcaaaccaga tggttcgcgg 120
cacggtcaac ctgccacacg gcaactggtaa gactgcccgc gtcgcggtat tcgcggttgg 180
tgaaaaggcc gatgctgccg ttgccgcggg ggcggatgtt gtcgggagtg acgatctgat 240
cgaaaggatt cagggcggct ggctggaatt cgatgccgcg atcgcgacac cggatcagat 300
ggccaaagtc ggtcgcacgc ctccgggtgct gggtcgcgcg ggcctgatgc ccaaccgaa 360
aaccggcacc gtcaccgcgc acgtcgccaa ggcgctcgcg gacatcaagg gcggcaagat 420
caacttcgcg gttgacaagc aggccaacct gcacttctc 459

<210> 606
<211> 464
<212> DNA
<213> Mycobacterium tuberculosis

<400> 606
gctgagctcc acggcgtgga tcaaggtacc ggccgggatg ttgcgcaatg gcaggttgtt 60
gcccggcttg atgtcggcgt tagcgccgga ttccaccaca tccccttgcg aaagtccgtt 120
gggtgcaatg atgtagcgt tctccccatc gagatagtgg agcaacgcaa tccgtgcggt 180
acggttcggg tcgtactcga tgtgcgcgac cttggcggtt acaccatctt tgtcattgcy 240
gcgaaagtgc atcatccggg aagcgcgctt atgaccgcgc cttttgtgcc ggggtggtaat 300
ccggccatgc gcgttgcgtc caccgcgacc gtgcagcggg cgcaccagcg acttctccgg 360
ggttgaccgg gtgatctcgg cgaaatcaga tacgtctggc ccgcgacgac caggcgtcgt 420
gggcttgtag ttgcgaattg ccatgtctaa tcaggtcttt ctct 464

<210> 607
<211> 205
<212> DNA
<213> Mycobacterium tuberculosis

<400> 607
atactcaagc ttgttggtga cctcgccggc gaacagttct cgcacgattt ccggattagc 60
gggactggtc accagttggg tatgcgggaa ggcgctgacg ttccgcgcga ttagctgttt 120
gatggacgcg gcggtgatgt cctgatcacg gaactggctg taatagccca gggtcgccac 180
gcttccatcc gggcccggac ccggc 205

<210> 608
<211> 244
<212> DNA
<213> Mycobacterium tuberculosis

<400> 608
gatgatcgcc ggtgccaccc cgatccgtgc ctccggtcagc gcgaacgtgc tttccgggtcc 60
ggcgaccacc atgtcgcacg caccgaccag gccgaaccgc ccggcccgcga catgcccggt 120
gatggcgccg accaccggca gcggcgactc gacgatggcg cgcaacagcg ccgtcatttc 180
ccgcgcccgc gccaccgcca tccggtacgg atcaccacca cctccgcccgc cctcgtctgag 240
gtcc 244

<210> 609
<211> 289
<212> DNA
<213> Mycobacterium tuberculosis

<400> 609
atactcaagc ttgccgcaat cgaaaccaac ctgtttgtgc cgcaagaaat tacgccgtgg 60
cccggcgccg atcaagaaac gccccggcgc gcggcggtgt cgtcgtatgg catgacgggc 120
accaatgtgc acgccattgt cgagcaggca ccggtgccag ccccgaatc cgggtgcacca 180
ggcgacaccc cggccacacc cggtatcgac ggcgcgctgc tgttcgcgct gtcggccagc 240
tcgcaggacg cgctgcggca aaccgccgcg cggctggccg attgggtct 289

<210> 610
<211> 282
<212> DNA
<213> Mycobacterium tuberculosis

<400> 610
ttggcggggtt ggccacanca ncccgccggt gacggcgacg atgctgggct ggttgccggc 60
ctgcgccacc gcggcttgca tgctgggttg ctgtcttggt acgatcccga aatagtccac 120
gcggatctgg tgattttgcg ggctaccgcg gattaccgcc cgcggtctga cgagtttttg 180
gcctggacta cccgcgtggc caatctgctg aactcgcggc cggtggtggc ctggaatgtc 240
cancgccgtt cacctacgtg accttgatgg gatccggggg nt 282

<210> 611
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 611
ncgtggacac cgggtgtcgan cgccaccagc cgcattgtct cangtcnatt ccgtcctcgg 60
caacatcttg aatgccgagc agcgccctgg cgtgatcggc aaccggggat gaccgctcgc 120
cgatccgctc gacaatcccg gcggcacgtg acatgccggc ggacggctcg acgagctgga 180
acttcagcga cgacgatccg gaattgatca ccagcacggt gctactcatg gacccttgcg 240
cctgaatccc gtgatggcca cgggtgttgac tattcgtcga cagtgcaccc gagatagtct 300
tcacggctgc gt 312

<210> 612
<211> 349
<212> DNA
<213> Mycobacterium tuberculosis

<400> 612
catgtattgc cgtgctcacg gcgccacgct cgatgggttc tcgaagtctc cgggctggtg 60
tacagcttct cgttgatctc gttcgccacg ccgtcctctt cccgccgacg acccgatctc 120
gatctccana atgatcttgg cggccgcgcg cgccttgagc agctcctggg cgatggccag 180
gttctcatcg atgggcactg ccgaccgtcc cactgtgctg acggaacaaa gatgtcacct 240
tgctcacgcy tgcgcnagat cncanaaggc ccggacatac tgtcnacttg tccttgggca 300
gtgggtccgtg tcagcccacg tgacgggtac ttggcgcgat aacgtggtg 349

<210> 613
<211> 350
<212> DNA

<213> Mycobacterium tuberculosis

<400> 613

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gccaccacga cccggccgta actctgctca cggaaatgcg gccaggccgc gcgtagcacg 60
tggtatccgc cataaagggtg caccttaagc acggcgctccc aattctcgaa cgacatcttg 120
tggaagggtgc cgtcgcgcaa gatcccggcg ttgctcacca caccgtgcac ggcgccgaat 180
tcgtcaagcg cggctcttgat gatgttcgct gcgcgcgtcct cgggtggcgac gctgtcctta 240
gttggecgacc gcccgggcccc ccttgtcgcg aatctcggcg acgacctcat cggccatcgc 300
cgaacggcgc ccgtgcccgt cgcgggcgcc accgaggtcg ttgaccacga 350
```

<210> 614

<211> 126

<212> DNA

<213> Mycobacterium tuberculosis

<400> 614

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tcccgccgtg acggtgctcc atctccctca gcaacgcgtg aagtgggtccg atcccgcggc 120
ttcagg 126
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<210> 615

<211> 395

<212> DNA

<213> Mycobacterium tuberculosis

<400> 615

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gatcacgtcg cgctcgcatc gagcatggcc cgcgacgcta cacgatcgcc gtcgtcgatg 120
acacgaccga gccgtacgcc ggccgtaagc cgcgccagga ttccggcga aaacgtctacg 180
tgccgggtgt actgggtgtc gaatgattcg tgggggtgct atgcgtcctg caatcgtcga 240
catagatccg tcgccgcata gcgtcgacaa ctccgggtga gtggaatata cttgccgatc 300
acgcgacgtg cgcggatcga tgccgaccga aatacgacca catggctctt gttgcnacgt 360
gttggcggca tcaaataccc tcagtgcctg ccgac 395
```

<210> 616

<211> 371

<212> DNA

<213> Mycobacterium tuberculosis

<400> 616

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ttncgcgctt nacgcctact ccnagacgat gctcgacgcg tgtgagcaca cggcgctgct 60
gtagacggca cggcgagcgt ggatcgcgct tgggtgaccc aagcctctac gcgcgtcgct 120
gcgtcgatcat cgggtaccga acatattccg gtcgttgccg agagtgtgca tgtgcggctc 180
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agcgtgagtc gcggcgcatc gcgcacttcg cgatcgcggtg actggtcctc gcgactgcgc 360
gcatgcgtag c 371
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<210> 617

<211> 423

<212> DNA

<213> Mycobacterium tuberculosis

<400> 617
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 tggagtgccg cgcagccttg cccgangtcg cgatcgcgtc gcgggcttcg gggagcagac 120
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 tgcatgacga tgggcgcagg cccgctcatg tcccgtagac ggggagatac gggcagccgc 300
 ggatcgagac ctacgtagcg cggcgcccat cgtgccatcg acgaagaatg acggatcgcg 360
 cagcgccgtc gcgtcgcttc gatgtcacgc gagatcgcca cggcagatca gcgatgcgcg 420
 ggc 423

<210> 618
 <211> 354
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 618
 cggtagcccg gcaacaaacg ccttgtagcg agcgcgtccg agcggtcacg ggccctccacc 60
 gtcatgcaca gctccttctc caggtctacg ccgacgtcgc ggtccacatt ggtgagcttg 120
 gcgaatgcct cggcaacctc gtcgaaatgc gctccgcgt ccgcatcgaa ggtcgccatg 180
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 gagtccggcc gaacaatggc catttcccg cactctagaa tccagtcacg gtctcggtga 300
 cgacgccttg ccgatcacat agctcgaccg gatcggagag aatctggttc tcgt 354

<210> 619
 <211> 128
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 619
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 ctcaacgaac gattcctgaa cgaagggtcg tccaccaacc tccaaaccga acggttgcca 120
 gccccggc 128

<210> 620
 <211> 295
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 620
 gcaagtccgc tcaatgtggt tgtgatcaca ngactacgtc gcctcaatca gctcaaacgt 60
 caccgccgtg cgtgctgcgc agcatgaagg tgggcgcccg cacgatgtgg gcgaagcaac 120
 aggtaataac tggtcggcat gggtaaccc tcattggggc gttgcggatc ggggtgcacgc 180
 ccggagtgcc ggtcgaaactc aacaccgcct tcaccgatct tttcgtcgaa aatggcggtc 240
 gtgtcggggg atacgtccgc gatcccacga ggcggaatcc gctgagccgc actga 295

<210> 621
 <211> 361
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 621
 atactcaagc ttcgcgccct caagcggctg aagggtggtc cggcgtncca acngtcgggc 60
 aactcgccga tgggcatggt gctcgacncc gtcccgggtga tcccgcggga gctgcgcccg 120

```

atggtgcagc tgcacggcgg ccggttcgcc ncgtccgact tgaacgacct gtaccgcagg 180
gtgatcaacc gcnacnnenn gntgaaaagg ctgatcgatc tgggtgcgcc ggaaatcatc 240
gtcaacaacn agaancggat gctgcnggaa tccgtggacg cgctgttcga caatggccgc 300
cgcgggccggc ccgtcaccgg gccgggcaac cgtccgctca agtcgcttcc cgatctgctc 360
a 361

```

```

<210> 622
<211> 361
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 622
tgcgcatggc agttgttgcc ggcttgagtc gcgttagcgc ggattccacc acatcccttg 60
cgaagtcgtg ggtgcaatga tgtagcgctt ctcccatcga gatagtggag caacgcaatc 120
cgtgcgtacg ttgggtcgta ctcgagtgcg cancttgccg ttgacaccat ctttgtcatt 180
gcggcgaagt cgatcatccg gtaagcgcgc ttatcgacgc cgctctgtg ccgggtggta 240
atccggccat gcgcttgctt ccaccgcgac gtgcagcggg cgcacaccga cttctccggg 300
tgacgggtga tctcggcgaa tcagaacctg gcgcgcgaca cagcgtcgtg gctgtacttg 360
c 361

```

```

<210> 623
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 623
tgggtgatca gatactggct agttggtcgg gtggggatgat cgaagatcgc ggtggccggc 60
agcgttactg ccggtgacgt gtttaagcgg taccgtactcc acggcactca angaattana 120
tcccgaatcg gcaaaccctg gccagcgtcg agtcgcgcgc gccgtcgcgc cccccaccgc 180
tgcggcgatgc tcacatacca cctcgatcgc tgccggaggt gctcgtcggc cgaccgaccg 240
gccagccggg cggcaaaccg gaggacccaa gattcagcac caccatcgct agcccgatct 300
ggccgcgcgt gg 312

```

```

<210> 624
<211> 454
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 624
tcgtagcggg tgcgaccant ccgcggacag ctccgccacg cgacgggtcg ggatcaccgc 60
ggtcaaacca ccgagcggcg aggatctctg gccgtcgacg tgaccgcgca cgcccgcggt 120
gatggccagt cccgaccgcc gttccacttg gcgtacgcgc tggatgtgtt gtgccgcaac 180
ggaatcccaac ctcaattatg acctcgttgt gggcgagcgc ggtatcgtag gcccgaccag 240
gaatcgtcga tgctatctca cgtcaccgaa ggctctctcc agcacaccgc atccagaacg 300
tgcacacngt cgacatgtct cggcgggatcc gcctgcagaa cgaacgccan gtgcgctgtg 360
cgacacgggt cgcgatcacc gctcgcacgc ggagatcggc acacgcgcag cgcacgatc 420
ataatctctc gatgcggtct ccaccaccga acag 454

```

```

<210> 625
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

```

<400> 625
 atactcaagc ttcgctgagg tgggtggggca cgatcacgtc accgcaccgc tgtcgggtggc 60
 gctggatgcc ggccggatca accacgcgta cctgttctct gggccgcgtg gctgcgaaa 120
 gacgtcgtca gcgcgtatcc tggcncggtc gttgaactgt gcgcagggcc ctaccgcaa 180
 cccgtgcggg gtctgcgaat cctgcgtttc gttggcgccc aacgcccccg gcagcatcga 240
 cgtggttagag ctggatgccg ccagccacgg cggcgtggac gacaccgcg agctgcggga 300
 ccgcgcgttc tatgcgcggg tccactcacg gtaccgggta tttatcgtcg acgaggcgca 360
 catggt 366

<210> 626
 <211> 363
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 626
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 caacgcgtcc gacctgaatt ggcagcaagc ggcgctgtg gccggcatgg tgcaatcgac 180
 cagcacgtc aacccgtaca ccaacccga cggcgcgtg gccggcgga acgtggtcct 240
 cgacaccatg atcgagaacc ttcccgggga ggcggaggcg ttgcgtgccg ccaaggccga 300
 tccgtgggg gtactgccgc agcccaatga gttgccgcgc ggctgcatcg cggccggcgga 360
 ccg 363

<210> 627
 <211> 367
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 627
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 tcggggtggg gtgatcgaag atcgcggtgg ccggcagcgt tactgcggtg acggtgtta 180
 agcggttacg tacctccacg gcactcaagg aattaaatcc cgaatcgga aacgcctggc 240
 cagcgtcgaa tccggcagcg ccgtcgcgcc ccagcaccgc tcgggcatgc tcacatacca 300
 cctccatcgc tgccggcgaat tgctcgtcgg ccgaccgacc ggccagccgg gcggcaaacc 360
 cggaaga 367

<210> 628
 <211> 518
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 628
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 cgtcgccaac tccggagggc tccaggacca cccgtcaatt gtccggttcg cccgcaacgg 180
 tgaggtgctg gtcngccagc ccgccaagaa caggcagtga ccaacgtcga tcgcaccgtg 240
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 gcccgagat ctgcgccgat tctgatgaac tgaacgcgac ccgaggctac tcggtganga 360
 catnacgacg cgttatcaca ccccgctcno ttcaatgacc ccacgtcngg caccaaggac 420
 ccggcaatcg cggctcactt gngcgatngt cnacaaccaa cgcgncgcct ggctacgggc 480
 tcaacaaggc anaagacaca atccgctctc gattgggtg 518

<210> 629
<211> 435
<212> DNA
<213> Mycobacterium tuberculosis

<400> 629
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ctggaaagca tcttcgctga cgtcgaaaag cggccgcggc tcaccatgtt cgacaacttc 180
ggtggccgga tcccgtcgga caaacgcgcc atcaagacac ccggcgagct cgcgatcgaa 240
cgcggcgaac cttggcccca gccggtcccc gagccggcgt tcaaggcggc gattgcgcat 300
gctaccgaag ccgctgaggc cgcccggtcc gacccgcca aaccgggcac ggcgccaacg 360
gttcgccccg cggcaccacc ggtccggtga ccgcagtag gtccccccag cctgactacc 420
gtgccccggc gggct 435

<210> 630
<211> 398
<212> DNA
<213> Mycobacterium tuberculosis

<400> 630
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gactacgttc gcctcaatca gctcaaactt ccccccggtg gcgtgctgcg cagcatgaag 120
gtcggcgccc gcacgatgtg ggcaaggca acaggtaga acctggctcg catgggtcga 180
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accgccttca ccgatctttt cgtcgaaaat ggcgtcgtgt ccgggggtata cgtccgcgat 300
tcccacgagg cggaatccgc tgagccgcag ctgatccggg ctgcgcgcgg cgtgatcctg 360
gcctgtggtg gtttcgagca taacgagcag atgcgaat 398

<210> 631
<211> 464
<212> DNA
<213> Mycobacterium tuberculosis

<400> 631
gtccagtcaa gcacggttcc tctccgacta cgccaagant ggcgacgtgt cagtgcanaac 60
agcgganatg gtggcgcccta tgcgtcgacg ctcaaaacn gcggtgancg cgttctggtc 120
gtgcaccatc gagccgtgcc agcccggccg cgtgccgtca gccgcatcca ctggatgcct 180
tctcgnggtt tcaatcangt acangcgacg ttcgccacca tcgtgccggg gcacggttag 240
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gtcgacagcc agtgtgatnc gtatttgccg ccgtgctcct cgtcgcaacg atgcgaacac 360
agatccgtgg nggacgatag cggctgacaa ngtgggggca acacaatcac atgccacatt 420
tcttcatttc acgcccacaa cccagacttc gtctcgatgn gccg 464

<210> 632
<211> 499
<212> DNA
<213> Mycobacterium tuberculosis

<400> 632
cacgcggtct ggcccgatcc gaagatccct ttgccggcgt ggcggctctg ctccggcggtg 60
ttgtacactt ctgcaacacc tcggcaccga caccaccacc gtngcttgaa caccgccaac 120
atcggcagca gatcttgatg gtccgtgtga atcccacggt gactttggag tgggaaggcg 180
catactgacg gccgcgccag cacatgagct agcggcagga aaaccagcag ccgctcacct 240

tgcgcagcag	cgtcnggtga	tatgcctggc	gcccttaatc	tcgtgaacca	gttggattgg	300
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caacgtantg	cgcaggcggc	ggttactcgg	cggttcaacg	agccccgctc	gtgagcnatc	420
agcctttgga	ccgaacggga	ttcatactcc	gcaggcgggc	ctccgaaatc	ggcacatgtc	480
ctttgatcgt	tcgcaacan					499

<210> 633

<211> 343

<212> DNA

<213> Mycobacterium tuberculosis

<400> 633

ggccatgtca	catcgggtgg	acaggtaaac	cgcgccgtgt	gcgcgggtctc	ggagatcaga	60
acgtgggtcg	agttgaaccg	cgggctttca	gccagtcgcg	ataatcggcg	gaagtcggcg	120
cctgccgccc	caactagcgc	gactcgccac	ctagcacacc	gatggcgaag	gccatgtntc	180
cggccacgcc	gccgcgggtg	atcaccaagt	catcgactag	gaagctaagc	gacancttgt	240
gcagggtgtt	gggcagtagc	tgctcggaac	atcggttgga	aaccgcatca	aatggtcggg	300
ccaatcgaac	cggttaccgc	atcgtcacia	aaatctccgt	cct		343

<210> 634

<211> 192

<212> DNA

<213> Mycobacterium tuberculosis

<400> 634

gggtctacaa	ccaccgggtc	tgactttctg	ggttccaccg	ctcgcgccgt	cgcgacaaac	60
agcgcggtcg	aaccgacact	cgttgtgatg	tcccagctat	cacctccggt	aggcacccaa	120
tcgaccctac	ccgggtatct	cacccccgat	ctccagggtc	cgccgatcca	tgcgcatccc	180
ggtccggatc	cc					192

<210> 635

<211> 376

<212> DNA

<213> Mycobacterium tuberculosis

<400> 635

caggcatgca	agcttgtcgt	attccgtggc	actgtcagac	atatgcgccg	ctcctcctca	60
tcgctgcgct	cggcacgtgc	gccggcggtc	atggcgtcac	cctacccaag	ccgaacgcga	120
aacgagaacg	tggtccatta	ttaggggtgtg	agcaccaata	ccagattgct	caccaggaac	180
tcacgcagca	ccgggacgga	tgtagccac	cacgcccata	tgggggtgga	gcggggaaat	240
acggctaacg	cggtccgggt	gccggcgagc	cagcgagac	cctcgggcgc	ggacacggct	300
aacaacgacg	acccatagtt	gttctttgcc	ggatggccgt	gtttgctgac	atatcgggcg	360
cgcgccgggc	gccgcc					376

<210> 636

<211> 83

<212> DNA

<213> Mycobacterium tuberculosis

<400> 636

nctacgtgc	tgaatgttgt	gcgcgggagg	anctcaagac	ccacgcgggt	gtacgcggac	60
ntgcgacatg	ttcaaccgcc	gga				83

<210> 637
<211> 319
<212> DNA
<213> Mycobacterium tuberculosis

<400> 637
ctaaccaaca agccatggtg gttggcgccg tcgagaggtc ggcggtcgcc acaacgggaa 60
gatcgcttg agcgtcgctc gaccgcccgc tcgagttggg tcataacgaa gtactgatgc 120
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tgccgcccgc gccagggcac cagctgtttt agcgcattgt gtcgcccg taataaagga 240
ngtcggtcgc ctccgctgct gtggttgccg aataacatct tcccttcctg caacaggatg 300
agaatggtt taattgctc 319

<210> 638
<211> 94
<212> DNA
<213> Mycobacterium tuberculosis

<400> 638
ctaagctttc ggggtccgcg ccactagtag cgcggttgccg gccccgccga cctagaatgt 60
tccgccatt gccgtttcct cccgccgcg ggtt 94

<210> 639
<211> 122
<212> DNA
<213> Mycobacterium tuberculosis

<400> 639
tctggtgccg ggtgtgccga cgggtccgtc cgccctctgct tcagtgattc tgtgatgcga 60
ccggcaacgt cctcgttgtt cgggtgtctat gtggtccgtc tctccttgtt ccgcatacga 120
tt 122

<210> 640
<211> 210
<212> DNA
<213> Mycobacterium tuberculosis

<400> 640
gcgatcgntn accacaaggc cgcaaccgtt cgcgcgtcga ctgaacgtgc tgccgcctgg 60
agaactggcg ctgctgccac ctggtcggcg catcggcact tcgaggactg gatttcgacg 120
cgtggcccga cctgangtng gcggtggacn ngtgtgcacc cggttgattc ctccgccttg 180
ccgggatgcc acctgcgcct ggtggtcgat 210

<210> 641
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 641
cgtgaccgga cggggtgccg cggaaccgg tcttgcccaa ttgccgggga ctggggctgg 60
agtataaagc gggcctgttg ccggaagata aagtcaaagc ggtgaccgag ctgaatcaac 120
atgcgccgct ggcgatggtc ggtgacggta ttaacgaccg ccagcgatga aagctgccgc 180

catcgggatt	gcaatgggta	gcggcacaga	ctggcgctgg	aaaccgccga	cgcacattaa	240
ccataaccac	ctgcgcggt	ggtgcaaagt	attgaactgg	cacgnccact	cacgccaata	300
tccgccagaa	catcactatt	gcgctggg				328

<210> 642
 <211> 553
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 642						
atactcaagc	ttcttaccba	nagcatgaac	cccgccgtcc	aatgccgcc	ccgtgggtgct	60
gtcggccggc	cgggtgcggg	cacaatcgcc	gagttcggcg	aacagatcct	cgaaggtcct	120
cacggccagc	gattgttgca	cgtgtcagcc	agccaagtca	cggtgggttg	acgccacacg	180
ttcgccaccg	ccgcgccgcg	cattagggca	tcctaataata	ggttaggcta	ccctanttat	240
tcctgtggtc	naaggaggca	gccgaacgtg	accttcccga	tgtggttcgc	agttccgccg	300
gaagtgccgt	cagcatggct	gtccaccggc	atgggccccg	gtccgctgct	ggccgcggcc	360
agggcggtgg	acgcgctggc	cgcgcaatac	accgaaattg	caacggaact	cgcaagcgtg	420
ctcgtgcggg	tgcaggcaac	tcgtggcagg	ggcccagcgc	cgacggttcg	tcntcccat	480
caaccgttcc	gtattggcta	accacctgca	cggtggcacc	gcacaacgcc	gccacaaacg	540
cgccccgcta	tac					553

<210> 643
 <211> 486
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 643						
ggccgaactt	aatcggttgt	tggcggctgc	cgagttgggt	cactcggggg	gtgtgcactg	60
gcacatgggt	ggccggattc	aacgcaacaa	agccgggtcg	ctggctcgct	gggcgcacac	120
cgctcactcg	gtggacagct	cgcggttggt	gaccgcgctg	gatcggggcg	ttgttgcggc	180
gctggccgaa	caccgtcgctg	gcgagcggct	gcgggtttac	gtccaggtca	gcctcgacgg	240
tgacggatcc	cggggcgggc	tcgacagcac	gacgcccggc	gccgtagacc	ggatttgcg	300
gcaggtgcag	gagtcagagg	gcctcgaact	ggtcgggttg	atgggcattc	cgccgctgga	360
ttgggacccg	acgaagcctt	tgaccggctg	caatcggagc	acaaccgggt	gcgtgcgatg	420
ttccgcacg	cgatcggtct	gtcgcgggca	tgtccaacaa	cttgaaatcc	cgtcaacatg	480
gtcgac						486

<210> 644
 <211> 146
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 644						
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caccggttca	cgggctagtc	gagtagtaga	cgattgatta	gcctgaacgt	acctccgacg	120
gccagctgac	gaacgggttt	gacgga				146

<210> 645
 <211> 204
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 645

tcagctgtct	gtagaagggc	tggcgatact	gtgcactgtc	tgatatcgcn	ncgtngtggg	60
actatncagn	ccatnangat	gcggttcngn	nnntgcagag	natcctggna	cacatncggt	120
tcacgttaat	cancatcgcg	anttctncg	tnttcgatta	nttctgctaa	cgnntctnnn	180
agtgcctgcg	ggtcgactct	agag				204

<210> 646
 <211> 209
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 646						
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tgancagata	tcgntnacac	tgctcanaaa	cttcggatca	tcgntgatac	acaggccaac	120
gggtagcggg	tgtccaaccg	cttcgtcaac	ganatgggat	cgtgacganc	ctacgctcgc	180
aggatatgtc	gcngaccngn	tctaganan				209

<210> 647
 <211> 183
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 647						
cacttcatgc	tcgtgcggtg	gcntcgattt	gcncgagngg	ttagctcctc	gagtgngtga	60
cgtatcactc	cggcngacta	nccgtatcng	cgtcccgcac	cgggtcaactg	gtctagccac	120
accggggaga	atncncgacc	ggngctatcg	accnatcacg	gcttgctcgnn	aagatagnca	180
gcc						183

<210> 648
 <211> 154
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 648						
atactcaagc	ttgccaaccg	ccaccctgca	tccggggggc	gagcactgct	ccgccgacca	60
gtacgaacca	acctgcggtg	cccaggccat	tgacaatgtg	ctggtcggcg	cccgcgagtt	120
ctagcacagc	aacgccgcgg	ccaccacagg	ggcg			154

<210> 649
 <211> 219
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 649						
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attcgctgga	gcggtggctg	tccaagatca	ccctcgccca	gacctgctac	gggcacttct	120
acatcgagca	caaccgtggc	catcacgtcc	gggtgtccac	accggaagac	ccggcgtcgg	180
cgcggttcgg	caaaactttg	tgggatttcc	cgcccccc			219

<210> 650
 <211> 307
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 650
aataactcaag cttcgcggag gtggtggggc aggagcacgt caccgcgccg ctgtcgggtg 60
cgctggatgc cggccggatc aaccacgcgt acctgttctc tgggccgcgt ggctgcggaa 120
agacgtcgtc agcgcgtatc ctggcgcggt cgttgaactg tgcgcagggc cctaccgcca 180
acccgtgcgg ggtctgcgaa tcctgcgttt cgttggcgcc caacgcccc ggagcatcg 240
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accgcc 307

<210> 651
<211> 252
<212> DNA
<213> Mycobacterium tuberculosis

<400> 651
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cctggtctcg ttcggcaata actcgttcgg cgtgcaggac gcggcgcaaa cgtacttcgg 120
catcaacgcg tccgacctga aattggcagc aaaccggcgc tgctgggccc ggcatggtgc 180
aatccgaaca agcacgtca acccgtaac caaccccgaa gggccgctgg cccggcgga 240
cctgtctc ca 252

<210> 652
<211> 402
<212> DNA
<213> Mycobacterium tuberculosis

<400> 652
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ctgggcgtcg tgggtgcccg cctgccggtg caggaactgg attttactgc catctctcgc 120
gaccctgagg tgggtccaggc ttacaacacc gaccactcg tgcaccacgg acgggttccg 180
gccgggattg gccgcgcgct gctgcangtg ggcgagacca tgccgcggcg ancaccggca 240
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<210> 653
<211> 429
<212> DNA
<213> Mycobacterium tuberculosis

<400> 653
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gccccggctt gtcggctttt cctgcatcga cacatttccg gaggtgttgt ggttggcgca 180
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accttgaca 429

<210> 654
<211> 353
<212> DNA

<213> Mycobacterium tuberculosis

<400> 654

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aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
gccggtgatc tgggtggcca actcggcggg caccatctcc atcacgacng caaacgctcc 120
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caccgggaag ccgcccgaag tgttgacnct ttgcggggtg aagccgatgt gtgccatcac 240
cgggatnccc gccgcggtca gacangcat ttgctcggcc acccgctcac cgccctcgan 300
cttgacngca tgtgcgccgc cgtccttgaa gaaaccggtg gcgngggcaa ccc 353
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<210> 655

<211> 464

<212> DNA

<213> Mycobacterium tuberculosis

<400> 655

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cgatcaacca cctctggctc agcctcaaaa ttgcttcct taaacgggcc atcgacggat 240
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<210> 656

<211> 515

<212> DNA

<213> Mycobacterium tuberculosis

<400> 656

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ttgggtacgc ggcaatggan caccatttct cggatgaatc gactattcct gactacttga 180
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gggaaacctt tgaacaggcc cgggcgacat accaagccgg ccaagttggc aaccggctgg 360
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<210> 657

<211> 403

<212> DNA

<213> Mycobacterium tuberculosis

<400> 657

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gatggcgccg acgatggcgc ctggaccgat cttgtgccgc ttgccgacgg cgacgcggta 180
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ggccagtgcc cgcggcgatt cagccatcgg gacatcatgc tcgcttcata ctctcgacc 360
agtcggcgga acagctcgat tcccggaaac cccacgcgat gtg 403
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<210> 658
<211> 444
<212> DNA
<213> Mycobacterium tuberculosis

<400> 658
aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
gtagaaaaag atcgggtgagc gcatcgattc gctccgccgg gtttgccgct gcggcgccgg 120
agctgccgtg accgtctatt tgggtgatca gatactgggc tagttcggtc ggggtggggt 180
gatcgaagat cgcgggtggcc ggcagcgta ctgcggtgac agctgttaag cggttacgta 240
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cggcagcgcc gtcncgcccc agcaccgctg cggcatgctc acataccacc tcgatcgctg 360
cggcganttg ctgctcngcc gaccgaccgg ccancggggc ggcaaaccn gaagacccaa 420
gaattcatca ccaccatcgc tagc 444

<210> 659
<211> 437
<212> DNA
<213> Mycobacterium tuberculosis

<400> 659
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cgccgtagcg cagcgccctc tcgatctccg acttaagcga acccgagccg ccgtggaaca 180
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cttgcgcaag gatgtcnggg cgaancttga cgttgccggg cttgtanacg ccatgcacgt 300
tgccgaacgt cncggccagc angtatttgc cgtgtccacc ggccgccanc gcctcgatgg 360
ttttctcgaa gtctccggg ctggtgtaca gcttctcggt gatctcggtc gccacgccgt 420
cctcttcgcc gccgacg 437

<210> 660
<211> 422
<212> DNA
<213> Mycobacterium tuberculosis

<400> 660
aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
ggaaaggaga tccccgggaa cctggtggca accccgccat tggggttggt gggattgccg 120
atcagcgtga angaaagctc gtctggagac agcgggtcgg ccgaagccgc aagattggcc 180
atcactagtg acganatcgt ggcgctctgc gagtancna agacagtgc gttgttnccg 240
gcggcaattt gctgccgaat cgcactttcg agaatacng caccctgcgc caccgangaa 300
tcnaaagtga ggttcttgat caccgaccac gggtnagacc cttggggcgt gaagancgcc 360
tgcgcnataa caccggggac gctgccactc atgtncagcg cgttcgcgan ctcnacatat 420
ct 422

<210> 661
<211> 412
<212> DNA
<213> Mycobacterium tuberculosis

<400> 661
tcctggtgat cganggccgc ggttcgggcc gaaaatccgg ttcgggttcg ggctcgcggtt 60

ccaacttgan	cgcggtccgc	agctgattca	ccgtggcaac	gccggccaac	tgcgcataat	120
gcgcatccga	accctcacc	gcccgcgccg	cgatcacc	aacctgatcc	aacgacaacc	180
gcccctccc	cataccgcg	gcgcagcgcg	gaaactccg	caaccgccg	gccaccgtgg	240
cgatcgtgtg	ggcgttgcct	gacgaacanc	ccatcttcca	ggccaccaac	cccgccaccg	300
accgcgcccc	cgtcacacc	cacaaccggt	cgcgatccag	ctcagccacg	atctccacaa	360
tgcgcccata	aatcgcatg	cgctgaacgg	gcaactccgc	caactcctcc	aa	412

<210> 662

<211> 467

<212> DNA

<213> Mycobacterium tuberculosis

<400> 662

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatagaat	actcaagatc	60
tggtacccat	ccgtgataca	ttgaggctgt	tccctggggg	tcgttacctt	ccacgagcaa	120
aacacgtagc	cccttcagag	ccagatcctg	agcaagatga	acagaaactg	aggttttgta	180
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caatcgcgta	ccaaacacat	cacgcatatg	attaatttgt	tcaattgtat	aaccaacacg	300
ttgctcaacc	cgctctcgaa	tttccatata	cgggtgcggt	agtcgccctg	ctttctcggc	360
atctctgata	gcctgagaag	aaaccccaac	taaatccgct	gcttcaccta	ttctccagcg	420
ccgggttatt	ttctctcgct	ccgggtctgtc	atcattaaac	tgtgcaa		467

<210> 663

<211> 452

<212> DNA

<213> Mycobacterium tuberculosis

<400> 663

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatagaat	actcaagctt	60
ancgccacct	cccgggcgga	actccacggc	gtggatnaag	gtaccggccg	ggatgttgcg	120
caatggcagg	ttgttgccc	gcttgangtc	cgcgttagcg	ccggattcca	ccacatcccc	180
ttgcgaaaant	ccgttgggtn	cnatgatgtn	ncgcttctcc	ccntcnanat	aatggancaa	240
cgcnatccgt	gcggtacgg	tcgggtcnta	ctccatgtnc	gcgaccttgg	cgttganacc	300
atctttgtca	ttgcggcgaa	agtcnatcat	ccggtnagcn	cgcntatgan	cgccgccttt	360
gtgccgggtg	gtaatccggc	catgcgcntt	gcgtccaccg	cgaacgtgca	acgggggnc	420
caacganttc	tcnngggttg	aaccggtnat	ct			452

<210> 664

<211> 93

<212> DNA

<213> Mycobacterium tuberculosis

<400> 664

tgtgtgtggt	ggtaacccat	ctgagcagtg	tgccaaaccg	gggcagccag	ctcccaattg	60
acgtgagccc	gctcacttgc	tggtgaagcg	tcg			93

<210> 665

<211> 352

<212> DNA

<213> Mycobacterium tuberculosis

<400> 665

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatanaat	actcaagctt	60
------------	------------	------------	------------	------------	------------	----

gcgggtnatn	gccttgggtca	acggcacctg	gatcggatcn	gggtctaccg	cacacatnga	120
ctggagcttc	ggcgaantca	tgccttatgc	ctcgcggggg	gtgacgctga	ncccnnggtga	180
cntgttcngc	tcnnggcacg	tgcccacctg	cacgctcntc	naacacctca	ngccaccgga	240
atcattcccn	ggctggctgc	acganagcga	nnttgtcncc	ctccaagtct	aaaggctggg	300
cgananaagc	anaacgtccc	gacnaacggc	actccttttc	cntttgctct	tc	352

<210> 666

<211> 448

<212> DNA

<213> Mycobacterium tuberculosis

<400> 666

gaaatcattg	atggtttgag	tcaccaggcc	gatcaagcct	tcgccgagcc	aaattccaat	60
caagaggccc	aagcccgtac	caatcagccc	ggcaacgagg	gattccgtca	ttatcagcca	120
aaataactgc	tctcgggtta	cacccaaaca	gcgcaatatg	gcgaaaaacg	gtcgcggttg	180
cacgacatta	aatgtcacgg	tattgtagat	taaaaagata	cccaccaaca	angcaatcaa	240
actgagagcg	gttaaattga	ccgtaaaagc	gtccgtcatc	tgtttgacng	tgtcccgttg	300
ggtatccgac	gtttccatac	gcacaccggc	cggcagtcct	tgttggatgc	gtnttgcaat	360
ggcctcatct	ttgatgatca	aatcgatgtn	gctcagtcct	ccgggcatat	ggaacaactc	420
ttgggccgtg	gaaatatcag	caatgata				448

<210> 667

<211> 386

<212> DNA

<213> Mycobacterium tuberculosis

<400> 667

ctttcgccca	ggccggcgcg	gatgtcctca	tcgcttcacg	aacatcatcc	gagcttgacg	60
ctgtcgccga	acagatccgc	gctgccggcc	gccgcgccca	caccgttgcc	gccgatctgg	120
cccatcccga	ggtgaccgcg	cagctggctg	gtcaggccgt	cggagctttc	gggaagctcg	180
acatcgctcg	caacaacggt	ggcggcacca	tgcccaacac	gctgctaagc	acctcgacca	240
angacctcgc	ggacgccttc	gccttcaacg	tgggcaccgc	ccacgcgctg	accgtcgcg	300
cggtgccgtt	gatgctggaa	cactccggcg	gcggcagcgt	gatcaacatc	agctccacca	360
tgggcccggc	ggcggcgcg	ggtttc				386

<210> 668

<211> 378

<212> DNA

<213> Mycobacterium tuberculosis

<400> 668

tgtgggctcc	gatccggcgc	gcatggcatc	gacggcgacg	ccgatcgatg	acggccaggc	60
ttacgagctt	gaggggtgtga	agttgtggac	caccaacggt	gtggtagcgg	acctgctagt	120
ggttatggcg	cgggtaccgc	gcagtgaagg	gcnccgagg	ggaatcancg	cctttgtcgt	180
cgaggctgat	tcgcccgga	tcaccgtgga	gcggcgcaac	aagttcatgg	gactgctgtg	240
catcgaaaac	ggcgtgaccc	ggcttcntcg	cgtcaggggt	cccaaagaca	acttgatcgc	300
anggaagcga	cggctctgaag	atcgcgctga	ccacactcaa	cgccggacgg	ctgtccctac	360
cggcgatcca	accggagt					378

<210> 669

<211> 344

<212> DNA

<213> Mycobacterium tuberculosis

<400> 669
gagctggccg agctggaccg gttcaccgcg gaactaccgt tctcgctcga cgactttcag 60
cagcgggctt gcagcgcgct ggaacgcggc cacgggtgtgc tgggtgtgcgc gccgaccggc 120
gctggcaaga cagtggtcgg cgagttcgcc gtgcacctgg cgctggcggc cggcagtaaa 180
tgtttctaca ccacgccgct gaaagccctg agcaacaaa agcacaccga tctcacagca 240
cgctacggcc gtgaccagat ctggctgctg accggtgacc tgtcngtcaa cggcaaccgc 300
cggtggtggt gatgaccacc gaaatgctgc gcaacatgct ctac 344

<210> 670

<211> 411

<212> DNA

<213> Mycobacterium tuberculosis

<400> 670
gatctctgga tcggcggggc tctccgggccc ggccctcggcg acctcagcgg gccgcgcctt 60
ccggccgaac cattccctag ccatagatga ccgcacctcg atgcacgggt tggcggcaac 120
gcggcaaggc gtctngtcggg cccagccgcg gcaatgcggg taccggggag cgcggggtcng 180
tanaccancg ctggactgcg tcgcgcgggtg cgtcnacntc aaagtccccg gcgtcccata 240
tcgcgtatga cgcgggcgcg cccggcacca nggggtgccga tccggccgct tcgaacacca 300
ccggcccgcg agccgcgcg ggtccggcag cnaaccgcgc cgcgccgata cccgctgccc 360
gcgtgcgtga ttgaccgcg cgcgcacgct ggccanggat caaagcccgt g 411

<210> 671

<211> 473

<212> DNA

<213> Mycobacterium tuberculosis

<400> 671
ggacgcgtag cccgccaggc cggtcagggt gcccttccag tccacgcgcg tgtggtcggc 60
gaaccgctta tcttcaatcg agacgatcgc cagcttcatc gtgttggcga tcttgtccga 120
gggcacctcg aaccggcgct gcgagtnacg ccacgcgatc gtgttgccct tcgcgtcgac 180
catcgctcat accgcaggca cttgcccctc gagcagctgg gccgagccgt tggcaacgac 240
ctcagangca cgattggaca tcagccctag cccgcctgcg aacgggaacg tcagcgcagt 300
ggcgacgaca ctggccaaca gacagcaccg agccagcttc agaacggtga tcgcggcccg 360
gaagcgcctc ggcatgcgtn ctacagtagc gacctcctgt cactccacgt gccgctcggc 420
ccaatagaat ctttccgcgg gcgggtgaat ctctgcngga tcggggcngg cgc 473

<210> 672

<211> 357

<212> DNA

<213> Mycobacterium tuberculosis

<400> 672
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cgacgagccg accgaaatgc tgctcgagca gaccggttac cgcgaacgcc acccatgacg 120
gcaccagtgc actgcccttc ttgtgcacgt ngccgcgatc ctggatggtc ttgatgatcg 180
acgantaggt cgacggggcg ccgatgccca gctcctcgag cgctttgacc agcgacgcct 240
cngtgtnncg ggccggcggg ttgggtggcat ggccgtctgg ggtcaactcg acnatgtcca 300
accgttgacc cggggtcaga tggggcagtc gccgctcggc atcgtcagcc tcgccgc 357

<210> 673

<211> 402

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 673

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gtcttttcgat ggctgcttct tcggcgctga cgctggcgat ctatcacccc cagcagttcg 60
tctacgcggg agcgatgtcg ggcctgttgg acccctccca ggcgatgggt cccaccctga 120
tcggcctggc gatgggtgac gctggcggct acaaggcctc cgacatgtgg ggcccgaagg 180
aggaccgggc gtggcagcgc aacgaccgcg tgttgaacgt cnggaanctg atcgccaacn 240
acaccncgt ctgggtgtac tgcggcaacn gcaagccgtc ggatctgggt ggcaacaacc 300
tgccggccaa gttcctcgag ggcttcgtgc ggaccatcaa catcaagttc caagacgcct 360
acaacgcng tgccggccac aaccgcgtgt tcgacttccc gg 402
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<210> 674

<211> 336

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 674

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gccaggtcga ggtcccatgc gcgtgggcca ttgatgctga tcgccaggac gtcaaanatt 60
tggtccggcg tcagctgggc gaaaaacgtg ggccccagga cttgcccgga gctgcccggg 120
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gcgccgtang ccagctgctc caggggtgtcg gcatagagcc cgcgggcccgc agcgtgctcg 240
ctgtcggcga acaccgcatg gtcgagaagc gttgccgccc aacggaaatc acctgcgtcn 300
aangcttcgc gggccaactc cagcactcgg tcgatg 336
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<210> 675

<211> 405

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 675

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naaacgttcc ggcttnggtg ccgggcgctt atttgcgtct ctgggatcac nctcagtcgc 60
cggcggtcgc cgttgggcta tnanntgcac cganccggaa aatccgcacn anaactgcna 120
gtagcggcct gcagaantgc atcctcggcg aanngacta ccggtggaca ncnacaagcg 180
ccgccgaaca acgcactggc ccgagggatn ggctctatc ggccccgccc gtcgaactng 240
gaacagacng tgcggttcta ccgtgatctg gtgggaatgc tcnaccanac cttcccnann 300
gctacggaac nacggcgcgga tattcngccn tccanctcg agcctgacnc tngatatcgt 360
cgannctcac catcncgatc ngctgtgccg gtnttgctcg gactn 405
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<210> 676

<211> 389

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 676

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cgaacgacga acncncnaag ccatggtggt tggcgccgtc aaaagggtccg cggtcgccac 60
tactggaaaa tcgccttgag cgtenctcga ccnccgcctc gagttgggtc ntaacgaaat 120
acctgatgcc gatcangtcn acgtctccgt cgcnncaacg tgcagcggcg acccactcta 180
cnangtctcg gtnccgccnc ggccagngca ccaccagtga cnaatccntg cgccntcggg 240
ccnagcantc ccggtgcnac cgnggtgggt ccggcgatgg tngggtgtnc tcnntacngg 300
aacgccagcg cnatcancat cggcanactc ncgtcgatgt gccgcggcgc aaccatcccc 360
cacaatgatc nggtgcgtct gatcaggen 389
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<210> 677
<211> 135
<212> DNA
<213> Mycobacterium tuberculosis

<400> 677
ttaggcgtga cggccaccgg ggccactccg cacaatctgt acccgaccaa gatctacacc 60
atcgaatacg acggcgctgc cgactttccg cgggtaccgc tcaactttgt gtcgaccctc 120
aacgccattg ccggc 135

<210> 678
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

<400> 678
cgtcaccccc atgcgcccag atcggggctt cgcagataaa gcacgaactg gcggggcaaaa 60
cgtcgatctc ggagccggaa gggcaatcag ccgaccgtcg acgaacgaca ccggcgagac 120
cacttaggca gtgacggcct 140

<210> 679
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 679
cttttcncca tgtctcatga tnccnangga gaacnntgcn ancncngccg ctgacntngc 60
ncaccgctnt ggcnngngtg acattgggtg tggttgcggg ctgcnacgcc cgactcgang 120
ccganccatn tnttgcggcc gaccgcntnt cgtctcnacc gcanncccna tctcngccgc 180
nccccgtgga nctacngctn cttcgccatc tctcgccnat ggctccngcg nntcgcncaa 240
cgtntgggtt ggtnanctgc ctacctggtc nt 272

<210> 680
<211> 507
<212> DNA
<213> Mycobacterium tuberculosis

<400> 680
gctgcgccag tCGttcggtg cggtcatgcc gttggaccna ccatcggagt tagttgccga 60
accgcggacc accgcaagca cccggtcctg gtcgcgcacc gcgtcggcca accgcttgag 120
caccaccacg ccgcagccct cgccgcgcac gaatccatcc gcgttggcgt cnaanctgtg 180
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tcatgtaccn tcatgtcggg ctgcgcncga tattgacgat cgtgtttccc acgannanag 480
ancctcatca cgccggttcg agtgccg 507

<210> 681
<211> 470
<212> DNA
<213> Mycobacterium tuberculosis

<400> 681
ctgtgtgcgg nccggcgcgat atcgggccttt ttactaaccg aacccgatgt gggctccgat 60
ccggcgcgcga tggcatctac ngcgacgccg atcgatgacg gccaggctta cgagcttgag 120
gggtgtgaant tgtggaccnc caacgggtgtg gtagcggacc tgctantggt tatggcgcgg 180
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tgaccggcctt catcctcng ggtgcccaaa gacaacttga tcngcnngga agcgacgtct 360
gaanatcgcg ctgatcnac tcaacgccg acgctgtcct accggcgatc gcaccggant 420
tgccaanccg cgctnnant ncgcgnga at gnccgctccac nantgcatgg 470

<210> 682

<211> 346

<212> DNA

<213> Mycobacterium tuberculosis

<400> 682
tggggtgccg ggcgcgcgagt tgcgtccctg ggatcacgca gagtcgccgg cggtgccgt 60
tgggctatga attgcaccga gccggaaaat ccgcancaaa actgcgagta gcggcctgca 120
gaagtgcanc ctgcggcga aa cggagtacgg tggacaacga aaagcgccgc cgaacnacgc 180
actggcccg gggattggcg tcaatcggcc ccgcccgtcg aacttggaag anacantgcg 240
gttctaccgt gatctgggtg gaatgctcca acnnaccttc nccgaaagct acggaagcna 300
cggcgcgatn ttcggccttc ccagctcgac ctgacgctgg aaatcg 346

<210> 683

<211> 453

<212> DNA

<213> Mycobacterium tuberculosis

<400> 683
nggcngggaa gttaatgccc tactggttcn atgctcnac ntncncngtg acnnccctgcn 60
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tccaacanng ancaacgtgc acgggcggag tngtnccgcc acttcgncna tgacggggtc 180
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gactacacca ccacccaggc catcgccgnc gccgcggang ccccttcgac gccntactgg 360
tcnngngng gcgctctccg gttgtctnnc ncntgncgtg ttccttcacn cactgccna 420
catcganccc gagcnatnnc angtcctga atc 453

<210> 684

<211> 382

<212> DNA

<213> Mycobacterium tuberculosis

<400> 684
ggacactgtt cgcgtgcccc tcgtcaaagc cggagtggtc gtgctgcgcc ggacccgacc 60
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cgcgtgacctg tggctgatgc tgaacctcac cgcgttgact tggatccggt tcgggatctg 180
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aattgcntta tatgtctaca cataagacgc aaactgctct attgtcaant cccancgtgg 360
tgtggcncat gaagatgttt gg 382

<210> 685

<211> 408
<212> DNA
<213> Mycobacterium tuberculosis

<400> 685
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cgctgcgaa cggaacgctc agcnctctgg cgacaacctg gccaacan 408

<210> 686
<211> 372
<212> DNA
<213> Mycobacterium tuberculosis

<400> 686
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cggcggtnat ctgcgtcgagc tcntcttcca tcgccgcggg gaagtcgtac tcgacnagcc 120
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cgggcccggcg ggttngtggc atggccgtct ggggtcanct cnacnatntt canccgttga 360
cccgggtca ca 372

<210> 687
<211> 403
<212> DNA
<213> Mycobacterium tuberculosis

<400> 687
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gcgactgtgg cctganccgc aagggtngcc tnattcntcc tcctgnggca tggttncac 120
acggaatgnc ggtaagtctg gtccgcaacc tggcccgtg cgggttgggt tcggattcgc 180
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ngnctgcccg atcctngccc tgccgcnngc gatcncgttc gcancaccgc caccggaact 300
cncaangtgc gctcatcggt ctctacgcgc catcttcccc ggattcttcg cggcngngtn 360
ccgngggacc ccggactgtg acnggcccaa cggctcatca tcg 403

<210> 688
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 688
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ccgagcgcgg tcacggtctt tgcaccggga cgacgcatac cggcagcgcg aacatcnccg 180
cgggctgcag cntgaacgtc caataccant cnaacagtgt ccgcgcgtna aaaccgcanc 240
cggcggtcgc ttngtaate aacggtcctt gcgcaaccag ctgcaagtgc ccggtgccac 300
cggcggtgac gatcttgatg tctgoganct cgcgcaccag ctcgacggcc cgggca 356

<210> 689
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 689
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gagtattgag cgtatgtttt ggaataacag gcgcacgctt cattatctaa tctcccagcg 180
tggtttaatc agacgatcga aaatttcatt gcagacaggt tcccaaatag aaagagcatt 240
tctccaggca ccagttgaag agcgttgatc aatggcctgt tcaaaaacag ttctcatccg 300
gatctgacct ttaccaactt catccgtttc acgtacaaca ttttttagaa ccatgcttcc 360
ccaggcatcc cgaatttgct cctccatcca cggggactga gagccattac tattgctgta 420
tttggttaagc aaaatacgt 439

<210> 690
<211> 442
<212> DNA
<213> Mycobacterium tuberculosis

<400> 690
cttcacntcc gtacggctcg ggtacgcttc ggtcncattg tgcgagtgat agatgacgac 60
cgggacctcg tggcatctt ccatagcccg ccacaccttc agttgctcac cggaatccaa 120
ccggtanaag gtcggcganc gctcngcatt ggtcatcggt atagccgct cgggacggtc 180
anagccctcg ggtccggcca gcaactccga ggcttcgctg ggggtggctcg gacgcgcatg 240
ggccaccatc gcattcacca ggtctgcgcg aatcaccagc acgtanacgg ttcttttctt 300
aagcaacacc gaantttcag gaccggaatg ctccgggaaa catgtcacgg taggtcggtg 360
ttccggctac cggctganca ttgagcacgc cggccagcac cgcacgaacc aggcaatcag 420
ccgccgcgcg acccgaccgc gg 442

<210> 691
<211> 365
<212> DNA
<213> Mycobacterium tuberculosis

<400> 691
caggcatgca agcttgatgc cgccgaaacc gagcgtgagc acgccgccag ccaccacgcg 60
cgggtcgggc gccggggccc ggccgccagg ctgctccgct cgggtgatggc acgccaccgc 120
gacaccaccc ggctgcgcta cgtcgagcca taccgggagg agctacatcg gctcggccgc 180
ccagtgttcg ggccctcttt cgaggtcgag gtcgataccg atttgcgcat ccgcagccgc 240
accctggacg acagaaccgt gccctacgaa ttgcttgctg ggccggggcca aagaacagct 300
tggcatcctg gcgcgattgg ccggcgcggc gctggctgcc aaggaagacc cgttccggtg 360
ctgat 365

<210> 692
<211> 307
<212> DNA
<213> Mycobacterium bovis

<400> 692
aagntcgggt ttccacacgc gcggtttgac cctagtcata tgtaatcatg tgtaccatgt 60
gcgggcgctt ttccagggcc gcgaaccacc gganatttcc tgtgatttca ctgcatgcgt 120
accatctggc acaattgagc anttgtctnt cgcgggtggc ggncggggtg cgtgccgcct 180

gctgcganat	gcaccantaa	gcccgaaccc	accggcttgg	tgaccaccgc	acgctgcgtg	240
tggggggtaa	ccactccgcg	acccaagga	tggtcatttc	caatgaaccg	gctggacttc	300
gtccana						307

<210> 693
 <211> 414
 <212> DNA
 <213> Mycobacterium bovis

<400> 693						
gtcgcggttc	gatcgacccg	atcttcacct	cgtaacctcg	atgcttagca	ggatccagct	60
tgaccgcgtt	tggctctacc	cactctttga	gtggcgccgt	cgcctgtgcc	ccatcggtgt	120
tcatgacgaa	cgcttcgaaa	gacttcctct	tgtgagccgg	aatgtctgcg	taaagaagtt	180
ccatgtccgg	gaagtagacc	cggtcgccct	ccacgtggta	ctccttcgag	gtccgcttct	240
cgccggatcc	gataaacacc	ggccccaggc	accgcagcgt	gagttcgaac	ggcttcaggt	300
aggtgttcat	gcggcggaact	ccgggagtg	gagaaatagc	ggtcgcgcgt	agctgtagac	360
cggatggttt	ccgcccaggc	tgacgtcgaa	gatgcctcct	tggaaggggc	gcga	414

<210> 694
 <211> 256
 <212> DNA
 <213> Mycobacterium bovis

<400> 694						
aactcaagtt	tttacggtga	tcgcgcacat	cctggttcat	gaactggaag	cagcgcagcg	60
cttccttttc	ggccgcaaca	tgagccagcc	tctcgtcggc	ggtcgggtgc	aggtgctcgg	120
gcagctcggc	cgcgacagcc	gcctgaccct	gaaaccagct	tccatatccc	gcgacnaacg	180
acgccagtcc	gctacgtaac	ccctccgcga	ctgtccatgg	acaacagcgc	gttctccacc	240
gaccgggccc	gggtgt					256

<210> 695
 <211> 328
 <212> DNA
 <213> Mycobacterium bovis

<400> 695						
gtgcaggttt	cgacaatgtg	gtgccggttc	ggcggctacg	tgccatcgag	acactggcgc	60
angctatcgc	acccgttatc	ggctgcgagc	aaatcgccgt	atgcgttctt	gagcatgagt	120
cggcgaccgt	cgtcatggtc	gacaccacg	acggaaagac	gcagatcgcc	gtcaagcatg	180
tgtgccgcgg	attatcagga	ctgacctcct	ggctgaccgg	catgtttggt	cgcgatgcct	240
ggcgcccggc	cggcgtggtc	gtggtcggct	cggatagcga	ggtcagcgaa	ttctcgtggc	300
agctcgaaag	ggtcctgccc	gtgccgggt				328

<210> 696
 <211> 278
 <212> DNA
 <213> Mycobacterium bovis

<400> 696						
ttcagatcat	gcgcccgcc	cgaccacgaa	natgcacgtc	gnggttcgat	cgacccgatc	60
ttcacctcgt	aacctcgatg	cttagcagga	tccagcttga	ccgcgtttgg	ctctaccac	120
tctttgagtg	gcgccgtcgc	ctgtgcccc	tccgtgttca	tgacgaacgc	ttcgaaagac	180
ttcctcttgt	gagccggaat	gtctgcgtaa	agaagttcca	tgtccgggaa	gtagaccggg	240

tcgccctcca cgtggtactc cttcgaggtc cgcttctc

278

<210> 697

<211> 264

<212> DNA

<213> Mycobacterium bovis

<400> 697

```
gtcatgtgta ccatttgctg gcgcttttgc acggccgcga aacaccggag atttcctgtg 60
atttcactgc atgcgtaccg tctggcacia ttgagcagtt gtctgtcgcg gtggtcggcc 120
gggttgctgt ccgcctgctg cgagatgcac caataagccc gaaccaccg gcttggtgac 180
caccgcacgc tgcgtgtggg gggtaaccac gccgcgaccc caaggatggt catttccaat 240
gaaccggctg gacttcntca acaa 264
```

<210> 698

<211> 169

<212> DNA

<213> Mycobacterium bovis

<400> 698

```
aacagcgcgg ttgaactgat aggtgcggcc cggctcgagc aggccggggc atttgttcga 60
tgcggttacc gaaagatctc ttcggtgacc tgcccgcgcg cggccagctc ggcccagtgc 120
ccggcggttg ccgccgcggc gacgatcttg gcgtccacgg tggtcgggg 169
```

<210> 699

<211> 256

<212> DNA

<213> Mycobacterium bovis

<400> 699

```
gcatctgggc tggcggtggt tcgccgctcc gaagccgtcg aacaccatcg ccagcgcggc 60
ttccacatca acgaccattt cggccagctt gcggcgcacg agcggcttgt cgatgagcgc 120
cccaccgaat gcccgcgcgt gcccggcgta ncacagcgat tcgaccagcg cgcggcgcgc 180
gttgccgagg gcgaacgaag cggtgcccaa ccgcaatctg ttggtcagct ccatcatgcg 240
ggtgagtccc ttgccg 256
```

<210> 700

<211> 292

<212> DNA

<213> Mycobacterium bovis

<400> 700

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atcggtttcc agcaacagcc gatcgacggc ttcgcccang gccgctcccg ggcgaccgca 60
ccattgctgt cgcgcgctaa cgccatcacg gatgacgcgc agttcgtcgc tgtctagctc 120
caccatcgcc tgcacaccgg cggccagnac ccattggccg tcgcactcgt anagcaggta 180
atcctcgtcg acggactcgg taaccaccgc cgccagctcc gctgccaggt cggcgggggt 240
gacaccggcg ggcacgggga tggacgacga cgcgggtgctg acggcgcctg tc 292
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<210> 701

<211> 315

<212> DNA

<213> Mycobacterium bovis

<400> 701
agcggtttcc cangcgggat gtgctgtgag cgccgcacca ccagcgccga cgctaaggat 60
ggaacgcacg gcatcttctg acgcgtaacc gcgttgtgat cgcgagctga ggagacggta 120
tgggggaggg ttctcggagg ccatctggga tgttgatgtc tgtcgatctt gagccgggtgc 180
aactcgtcgg cccggacggg acgccgacgg ccgaacgccg ctaccaccgt gaccttctctg 240
aggaaacgct gcgttggctc tacgagatga tgggtggtcac ccgcgagctg gataccgaat 300
tcgtcaatct gcacg 315

<210> 702
<211> 328
<212> DNA
<213> Mycobacterium bovis

<400> 702
caagcttcca caggtaggga tgcaggaaca gcgcgttgaa ctgatagggtg cggccccggct 60
cgagcaggcc ggccatttgt tcgatgcggg taccgaaaat ctcttcgggtg acctgcccgc 120
cgccggccag ctccggcccag tgcccggcgt tggccgcccgc ggcaacgatc ttggcggtcca 180
cgggtggtcgg ggtcatgccc gcgagcagga tcggcgagcg gccggtcagc cgggtgaact 240
tcgtcgaaag cttgaccctg ccgtcgggga ggcgaaccac ggtcgggtgcg tanctccacc 300
aagcccgggc aacctcgggg gtggcgcc 328

<210> 703
<211> 352
<212> DNA
<213> Mycobacterium bovis

<400> 703
tggaacctcat gacaacgcgg cggcgattac ccccgctacc gccagcagca tgacggcggt 60
agcgaacacc gccggatgca gcgcaggtgc gtcgatgtgc tcacggaatc gccccggcac 120
cgcgatctcg aggatcacca gtgccacccc ctgcagcgcg acaccgacga ttccgtacac 180
cgccacgccg atcaggccct gggccagctg gcgtatatgg cggcgatggt gacgatggcc 240
agcgccacat acattgtggc ggccagaacc acggcgttgg ggcgggcggtc gatgaacact 300
aggcgacgca gatcgcccgg ggtcaacagg ttgaccatca gaaagcctgc ga 352

<210> 704
<211> 315
<212> DNA
<213> Mycobacterium bovis

<400> 704
tttggtgcgg cgggcaatca acttengctc ncagcggttt cccaggcggg atgtgctgtg 60
agcgccgcac caccagcgcc gacgctaagg atggaacgca cggcatcttc tgacgcgtaa 120
ccgcgttgtg atcgcgagct gaggagacgg tatgggggag ggttctcgga ggccatctgg 180
gatgttgatg tctgtcgatc ttgagccggg gcaactcgtc ggcccggacg gtacgcccgc 240
ggccgaacgc cgctaccacc gtgaccttcc tgaggaaacg ctgcgttggc tctacgatat 300
gatggtggtc acccg 315

<210> 705
<211> 390
<212> DNA
<213> Mycobacterium bovis

<400> 705
cgcccagggc cgctcccggg cgacccgacc attgctgtcg ccgcgtaacg ccatcacgga 60
tgacgcgcag ttctgtcgtg tctagctcca ccatcgctg cacaccggcg gccaggaccc 120
attggccgtc gcactcgtag agcaggtaat cctcgtcgac ggactcggta accaccgccg 180
ccagctccgc tgccaggtcg gcgggggtga caccggcggg catcgggatg gacgacgacg 240
cgggtgctgac ggcgcctgtc gcgacgctga gctcggacac agctagtaaa tgtagcctaa 300
cctacttaat gggtcgcagc cccccgggt cgtcgcattgt ccaacgttgc tcgactggaa 360
gaaaatgctc gtcgggggagc aaatggcacc 390

<210> 706
<211> 322
<212> DNA
<213> Mycobacterium bovis

<400> 706
aataactcaat cttgatcggg ttccagcaac agccgatcga cggttcgccc cagggccgct 60
cccgggagac ccgaccattg ctgtcgccgc gtaacgccat cacggatgac gcgcagttcg 120
tcgctgtcta gctccaccat cgctgcaca ccggcgccca ggaccattg gccgtcgcac 180
tcgtagagca ggtaatcttc gtcgacggac tcggtaacca ccgcccag ctccgtgcc 240
aggtcggcgg ggttgacacc ggcgggcatc gggatggacg acgacgcggt gctgacggcg 300
cctgtcgca ctctgagctc gg 322

<210> 707
<211> 398
<212> DNA
<213> Mycobacterium bovis

<400> 707
ggatgtgctg tgagcgccgc accaccagcg ccgacgctaa ggatggaacg cacggcatct 60
tctgacgcgt aaccgcgttg tgatcgcgag ctgaggagac ggtatggggg agggttctcg 120
gaggccatct gggatgttga tgtctgtcga tcttgagccg gtgcaactcg tcggcccga 180
cggtacgccg acggccgaac gccgctacca ccgtgacctt cctgaggaaa cgctgcgttg 240
gctctacgag atgatgggtg tcacccgcga gctggatacc gaattcgtca atctgcagcg 300
ccagggggaa gctggcggtg tacacgccct gtcgcgggca ggaagccgcg caggtgggtg 360
cggcggttg cctacgcaaa accgactggt tgttcccc 398

<210> 708
<211> 175
<212> DNA
<213> Mycobacterium bovis

<400> 708
atcacgacaa cagcgacggt gtgtcggatc agcggccccc gttgccgggc aatgttgagg 60
cgtttctgcg tctgggtgag gccggctggg acnccgaggt ggctcgtcgg ccacatgggc 120
agcacaccac cgtggtgatg catctagacg tgcaggaccg tgccgctggc ctgca 175

<210> 709
<211> 210
<212> DNA
<213> Mycobacterium bovis

<400> 709
gcggctacgt gccatcgaga cactggcgca ggctatcgca cccgttatcg gctgcgagca 60


```

aatcgcggtg tgcgttcttg agcatgagtc ggcgaccgtc gtcattggtc acacccacga 120
cggaaagacg cagatcgccg tcaagcatgt gtgcgcgga ttatcaggac tgacctcctg 180
gctgaccggc atgtttggtc gcgatgcctg 210

```

```

<210> 710
<211> 312
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 710
tacaagcggc acctcgccgg tgaactgacc gttcgcacgc tgcgcaccgc cgccggggcg 60
gtgctcggcg cgccggcgcc ccccgaggcc tgagagggga accaaccatg caggtgaaca 120
tgacggtaaa cggcgagccc gtcaccgccc aggtcgaacc ccgatgctg ctggtccatt 180
ttctccgtga tcagctgcgg ctcaccggaa ctcaactggg ctgtgatacc agcaactgcg 240
ggacatgcgt ggtggaggtc gacggcgtgc cggtgaaatc ctgcacgatg ctcgccgtga 300
tggcctccgg gc 312

```

```

<210> 711
<211> 255
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 711
agcggctggt tacgactccc tgtttgtgat ggaccacttc taccaactgc ccatgttggg 60
gacgcccgnc cntccgatgc tggaagccta cactgccctt ggtgcgctgg ccnncgcgac 120
cgagcggctg caactgggcg cnttgggtgac cngcaatacc taccgcaccc cnacctgct 180
ggncaaanat catcaccacg ctcgacttgg ttagecgccg tcgancgatc ctcggcattg 240
gaaccggttg gtttn 255

```

```

<210> 712
<211> 304
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 712
acgcgcgccg atcatatctg ctatggatgt acaattcagc tcttgctgtt ataccagtat 60
atggtgtact atttgatcta tgctgacgtg tgagatgcgg gaatcgggcc tggctcgact 120
cggccgggct ctggctgatc cgacgcgggt cgggattctg gtggcggtgc tggatggcgt 180
ttgctatccc ggccagctag ctgcgcacct cggggtgacc cgatcgaatg tgtccaacca 240
tctgtcgtgt ttgcggggct gcgggctggt antcccaacc tatgagggcc ggcaggttcg 300
gtat 304

```

```

<210> 713
<211> 352
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 713
ccgcgctgct gctgacgtcg gtcgaacgtg cgacacgtct gcgaataccg gccgaacgct 60
gggtttatcc acaggctggc accgacgccc acgacacacc ggccgtcgcc gaccgccacc 120
gactgcacgc gtcgacggcc attcggatcg ccggtgcccg ggcgctggaa ctggctgggc 180
tggggctcga tgacatcgaa tacgtcgacc tgtattcgtg ctttccctcc gctgtccaag 240
tcgccgcaat cgaactcggc ctggacacgg acgatcctgc ccgcccgctg accgtcaccg 300

```

ggggcctgac cttcgccggc gggccgtgga gcaattacgt cacgcactcc at 352

<210> 714
<211> 233
<212> DNA
<213> *Mycobacterium bovis*

<400> 714
caggcgtgca atgacctgca ctgcgccgga nantccctaa ccactaaaac cggggccgct 60
cacaagccgt gcagctcggg cagcgtcagg tgccgcgacca ggaantaaat gagcagaccc 120
gtgccgtcaa cgatggtggc gatcatcggc cccgaaacga tggccgggtc natgcgcaac 180
ttcttcagca gcggcggaag gacggcanc accagcgach accacaccac gat 233

<210> 715
<211> 336
<212> DNA
<213> *Mycobacterium bovis*

<400> 715
gcgaanact tcgtcaactt ccagggctgc ccgcaccaag tatttcgacg agtatttccg 60
tcgggccgcc gccgccggcg cgcggcagg ggtcatcctg gcggcggggc tggactcgcg 120
cgcgtaccgg ctgccttggc ccgacgggac cacggttttt gagctggacc gcccgcagg 180
ccttgatttc aagcgcgagg tgctcgccag ccacgggtgcc caaccgcgcg ccctgcgccg 240
cgagatcgcc gtcgacctgc gtgacgattg gccacaagcc ttgcggggaca gtggttttca 300
tgcggtcgca ccgtcggcatt ggattgccga agggct 336

<210> 716
<211> 273
<212> DNA
<213> *Mycobacterium bovis*

<400> 716
ttgggcnttg ccncaatan ggccccaatc aaaagccgag cagggtggaac ctancgcatt 60
cgctctntcg tntgtgcacc cgagccatcg cagcgcggg aattcccga tntcnccgta 120
ttctccggcg gccgggctaa cccatccan gccgaacggg tggtctntgc cgtgggtccc 180
gtgttgccg atcggggcgt caccgggggt gctcgggtgc ggntgacat ggcnaactgc 240
ccnatgggc cgaccctggg gcagataaac ctg 273

<210> 717
<211> 327
<212> DNA
<213> *Mycobacterium bovis*

<400> 717
tggtggaggc cccaccaan acccgccgt aactctgtc acggaaatgc ggncaggccg 60
cgcgtagcac gtggtatccg ccataaagg gcaccttaag cacggcgctc caattctcga 120
acgacatctt gtggaagggt ccgtcgcgca agatcccggc gttgctcacc acaccgtgca 180
cggcgccgaa ttcgtcaagc gcggtcttga tgatgttcgc tgcgcgctcc tcggtggcga 240
cgctgtcggg anttggcgac cgcccgcccc cccttgctgc gaaatctcgg cgacgacctc 300
atcggccatc gccgaaccgg gcgcccc 327

<210> 718

<211> 344
<212> DNA
<213> Mycobacterium bovis

<400> 718
gccggccaaa ctggccggcg gggttgctgt cntcaaggtg ggttccgcca ccaanaccnc 60
actcaaggat cgcaaggaaa gcntcaagga tgcggtcgcg gccgccaagg ccgcggtcaa 120
ggagggcatc gtccctggtg ggggancctc cctcatccac caggcccgcg aggcgctgac 180
cgaactgcnt gcgtcnnga ccggtgacaa ngtcctcggt gtccacgtgt nctccgaagc 240
ccttgccgct ccgttgttct ggatcnccnc caacnctggc ttggacggct cngtggtggt 300
caacaaggtc agcgagctac ccgccgggca tgggctgaac gtga 344

<210> 719
<211> 271
<212> DNA
<213> Mycobacterium bovis

<400> 719
cgaacctnaa ttgtcctgta atgcccagct caccaangca tggctggtgg ccggggcggt 60
gaagccggcg tctgcggcac cgtccaactc natgtggatn gccggaatgg ggatgtccgg 120
nacggcgaat ccgtanttcg cttgtcccggt gaggcccagg tggatggggg gaaggatcnt 180
ggtgtccggg atgatnatgg ggccgatgcc gccggttgaa gtccactgga tcgggaattc 240
gggaatcgtg atnccgacgt tcaggccgaa c 271

<210> 720
<211> 302
<212> DNA
<213> Mycobacterium bovis

<400> 720
ctaacggaat gaaagccctg gtggccgtn t cggcggtggc cgtcgtcgca ctgctcggtg 60
tatcttccgc ccaagctgat cccgaggcg atcccggcgc aggtgaggcc aactatggtg 120
gcccccaag ttccccacgt cttgtcgatc acaccgaatg ggcgcantgg ggaattctgc 180
ccagcctccg ggtctaccg tcccaagttg ggcgtacanc ctcccgcgc ctcgggatgg 240
ccgctgccga cccggcctgg gccnaggttc tcgctgctgc accggaagcc gacactgccg 300
gc 302

<210> 721
<211> 303
<212> DNA
<213> Mycobacterium bovis

<400> 721
ccgcgggaca cncctcnatg ctgccgccat ggacgcggtc gaacgcaagc agctgatcga 60
gctacaacgc cgcgcggaac gtttccgccc cgggcgtgac cgcattcccgt tgaccgggcg 120
gatcgcggtg atcgtcgatg acggcatcgc caccggagcg acggccaagg cggcgtgcc 180
ggtcgcccgg gcgcacggtg cggacaaggt ggtgctggcg gtcccgatcg gccanacga 240
catcgtggcg aagattcgcc gggtagcgcg atgatgtggt gtgtttggcg acgccggcgt 300
tgt 303

<210> 722
<211> 280
<212> DNA

<213> Mycobacterium bovis

<400> 722

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ctctgggacc ggccacggtg ccnccggcgt tcccggacgt gctgcgccag gtgtccggcg 60
gccgcgtgca tgggtgtccc ggatcggccg ctggccagag cccaccggtg aatctggcgc 120
ctggccgacc accgtgcgcc gtaggcttgc gatcgtgcag cgctggcggtg gccaggacga 180
gatcccgacg gattggggca gatgcgtgct caccatcggg gtatttgacg gcgtgcaccg 240
cgggcacgcc gaactgatcg cgcacgcggt caaaggcggc 280
```

<210> 723

<211> 333

<212> DNA

<213> Mycobacterium bovis

<400> 723

```
aataactcaag ctttcgtcag ttcattgcgc cagcagacca acaanagcat cgggacatac 60
ggantcaact acccggccaa cgggtgatttc ttggccgcgc ctgacggcgc gaacgacgcc 120
agcgaccacn ttcagcaa atggccancgcg tgccgggcca cgaggttggg gctcggcggc 180
tactcccagg gtgcggccgt gatcnacatc ntcaccgcgc caccactgcc cggcctcggg 240
ttcacgcagc cgttgccgcc cgcagcggac natcacatcg ccgcgatcgc cctgttcggg 300
aatccctcng gccgcgctgg cgggctgatt aac 333
```

<210> 724

<211> 320

<212> DNA

<213> Mycobacterium bovis

<400> 724

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tgccgcggat ttggctggct gcccaatatt cagaatcggg cttttctttt tgcgcgacaa 60
taaggtcaca gtaaaccctc gttttgtgag atgcggggcg ggccgggcca antcgacctc 120
gagtgaatgg atctcgagtg aatggacagg gcatcgcta cgagtcgcat ccccatccaa 180
cagaccggtg ctcttgcatc ggaccctgaa ggtcccgcac ggaggggtgt gttgccggcg 240
cggggtcacg gtgcggtagc gacgtagtgt ttgaacgaat ttcttgatgc tccaacctgt 300
ttgggtgttca atccagttct 320
```

<210> 725

<211> 296

<212> DNA

<213> Mycobacterium bovis

<400> 725

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aancttgccg gctcggccgg gtcnagcatc cagctgctcg gcaaggaggc cagctaencl 60
tcgctgcgta tgcccagcgg tgagatccgc cgggtcnacg tccgctgccg cgcgaccgtc 120
ggcgaagtgg gcaatgccga gcaggcaa acatcaactggg gcaaggccgg tcggatgcgg 180
tggaagggca agcgcgccgc ggtccggggc gtggtgatna acccggtcna ccaccgcac 240
ggcgggtggt agggtaaaac ctccggcggc cgtcaccggg ttagcccggt gggcaa 296
```

<210> 726

<211> 304

<212> DNA

<213> Mycobacterium bovis

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